For Reference
Do Not Take
From the Library

Every person who maliciously cuts, defaces, breaks or injures any book, map, chart, picture, engraving, statue, coin, model, apparatus, or other work of literature, art, mechanics or object of curiosity, deposited in any public library, gallery, museum or collection is guilty of a misdemeanor.

Penal Code of California
1915, Section 623

ctural Record
eptember



3 9042 05167760 4

ITECTURAL RECORD

INTERIORS

The Love Affair of Light and Form

BURLINGAME
SEP 15 2006

tunning Staircases

Offices à Go-Go at Oxygen Media

ecial Section: **The Digital Practice**


Spot the two terms
that don't go together:
1. Suspended Ceiling
2. Grid-hiding Visual
Until now.





CEILING SYSTEMS

[Between us, ideas become reality.™]

Introducing Optima Vector™, the revolutionary new acoustical ceiling with virtually no visible grid.

With Optima Vector, now you can achieve a clean, nearly monolithic look in a downward access suspended ceiling. That's because the unique Vector* edge detail provides a sleek 1/4" reveal that minimizes the existing grid. In fact, the larger the expanse of open plan ceiling, the more effectively the grid disappears, leaving you with a grid-hiding, upscale visual. It works with existing standard 15/16" grid systems, which makes it perfect for renovations – avoiding costly, time-consuming grid removal, replacement or repainting. And because Optima Vector is a high performance open plan ceiling, you can count on superior sound absorption, light reflectance and durability.

Suspended ceiling. Grid-hiding visual. Now together, from Armstrong.

For more information, call 1-888-CEILINGS or visit our website at www.ceilings.com

*Patent Pending

Armstrong

CIRCLE 1 ON INQUIRY CARD



Rock.
Stone.
Chapel Stone™

Hanover® introduces Chapel Stone™ Masonry Walling. Nothing quite adds charm to a building or home like stone. Hanover's Chapel Stone™ Masonry Walling makes this beautiful characteristic affordable and available. Manufactured from the highest quality concrete with over a million pounds of pressure, the product has the same density and high compressive strengths of natural stone.

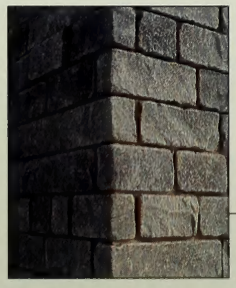
Hanover® Chapel Stone™ has a natural texture which is uniquely grained and unmatched, when compared to other similar products. The Masonry Walling is made in two natural color blends, Gray Blend and Tan Blend. These are designed to incorporate several shades within each color range, while keeping the natural stone tones for the project.



Gray Blend



Tan Blend



HANOVER®
Architectural Products
Where Concrete and Imagination Meet

240 Bender Road, Hanover, PA 17331
(ph) 717-637-0500 • (fax) 717-637-7145
www.hanoverpavers.com

CIRCLE 2 ON INQUIRY CARD

ARCHITECTURAL RECORD

09.2000



News

32 Dean Shuffle

38 WWII Memorial Design Refined

Departments

17 Editorial: The Keys to the Kingdom

22 Letters*

51 Correspondent's File: Great Britain *by Laura Iloniemi*

57 Practice Matters: When the IRS Comes *by Mark E. Battersby**

59 Critique: Midcentury Modernism at Risk *by Richard Longstreth*

63 Books: Urbanism of the New and Everyday *by Clifford Pearson*

67 Exhibitions: Vision Machine *by Claire Downey*

71 Exhibitions: Venice Biennale *by Michael Stanton*

75 Snapshot: Tales from the Crypt

248 Profile: Robin Standefer & Stephen Alesch *by Elizabeth Kubany**

Features

82 Oxygen Media *by Clifford A. Pearson*
Fernau & Hartman designs for improvisation at a cyber-age start-up's headquarters.

94 The Beckoning Staircase *by Sarah Amelar*
Stairs can provide moments of exceptional architectural drama.

Building Type Study 789

107 Record Interiors Intro *by Sarah Amelar*

108 Zumtobel Staff, *Berlin* *by William Weathersby, Jr.**
Sauerbruch Hutton
Form and light turn a lightbulb factory into a luminous showroom.

116 North Guest Apartment, *Oklahoma City* *by David Dillon**
Elliott + Associates
A pure white guest suite distills serenity to its essence.

122 Duggal, *New York City* *by Sarah Amelar**
Archi-Tectonics
A transformed warehouse becomes a streamlined digital "factory."

128 Georges, *Paris* *by Claire Downey**
Jakob+MacFarlane
Curvy forms undulate at the Pompidou Center's top-floor eatery.

138 SoHo Loft, *New York City* *by Clifford A. Pearson**
Marble Fairbanks Architects
Planes of sliding glass instead of walls fill a loft with light.

144 Tsunami and Lutèce, *Las Vegas* *by Lisa Findley**
Morphosis
Two dynamic, chic restaurants amid Las Vegas kitsch.

Building Science & Technology

155 Designing with Structural Fabrics
*by Wendy Talarico**

167 Tech Briefs

Computers

171 Computer Intro *by Charles Linn, AIA*

173 Digital Briefs

175 Project Extranets *by Kathleen Maher**
Storage spaces on the Web simplify project management.

183 Innovative Offline Web Pages *by Evan H. Shu, AIA*
Architects are finding new ways to use Web browsers, offline.

189 Digital Architect: Tech for Disabled Architects *by B.J. Novitski**
Emerging computer technologies that help disabled designers.

193 Digital Reviews *by Jerry Laiserin, FAIA**
Six new tech tools for diverse practice.

Products

199 Interior Finishes

203 Product Briefs

212 Product Literature

48 What's at architecturalrecord.com

218 Dates/Events*

226 AIA/CES Self-Report Form*

232 Reader Service*

236 Manufacturers' Spotlight

242 Classified Advertising*

WWW *** You can find these on our Web site at www.architecturalrecord.com, your source for more information on featured projects, up-to-date news, and more.**

***The AIA/Architectural Record** continuing-education opportunity is "Designing with structural fabrics" [page 155]*

Cover: *Restaurant Georges on the top floor of the Pompidou Center, Paris, by Jakob + Macfarlane*
Photograph: © Archipress

Above: *Oxygen Media headquarters, New York City, designed by Fernau & Hartman Architects*
Photograph © T. Whitney Cox



Ready for another fun ride with your current CAD system? Instead try Revit.



www.revit.com
1-877-47REVIT

CIRCLE 3 ON INQUIRY CARD

revit
revolutionizing building design

Natural instincts



Surface Systems™ Naturally Inspired

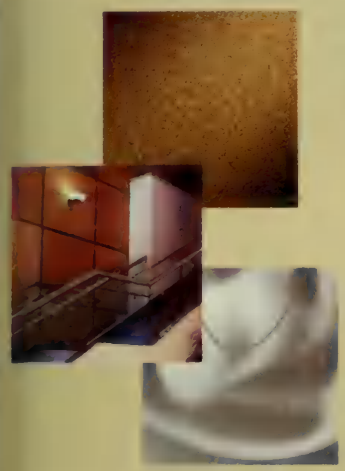




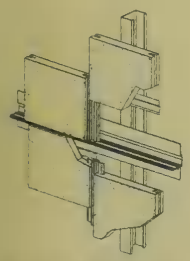


A walk in the woods. A day at the shore. The crisp morning air. The afternoon sun. Some days the inspiration fills every corner of our being. And it leaves its impression upon us.

CIRCLE 4 ON INQUIRY CARD



Surface Systems™ are easily customized modular wall panels which mount to the subwall using a unique pre-engineered system. Available in a variety of materials, including phosphate cement, metal and wood, and with a number of standard natural and faux finishes. Custom sizes, materials and finishes are also available. To find out more about Surface Systems, contact Marlite today.



Surface Systems installs on subwall using one of four pre-engineered systems.

Marlite

(330) 343-6621 Fax: (330) 343-7296
www.marlite.com e-mail: info@marlite.com

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Robert Ivy, FAIA
MANAGING EDITOR	Ingrid Whitehead
DESIGN DIRECTOR	Anna Egger-Schlesinger
SENIOR EDITORS	Charles Linn, AIA Clifford Pearson Wendy Talarico Sarah Amelar
NEWS EDITOR	John E. Czarnecki, Assoc. AIA
PRACTICE EDITOR	Elizabeth Harrison Kubany
PRODUCTS EDITOR	Rita F. Catinella
COPY EDITORS	Elizabeth Kugler, Lisa Rosman
WEB CONTENT EDITOR	Kevin Lerner
ASSOCIATE ART DIRECTOR	Kristofer E. Rabasca
ASSISTANT ART DIRECTOR	Clara Huang
PRODUCTION COORDINATOR	Juan Ramos
INTERN	Amy Simonovski

EDITOR AT LARGE	James S. Russell, AIA
SPECIAL CORRESPONDENT	Suzanne Stephens
ILLUSTRATORS	Muriel Cuttrell, Kira Eng, I-Ni Chen
CONTRIBUTING EDITORS	Robert Campbell, FAIA, Andrea Oppenheimer Dean, David Dillon, Lisa Findley, Blair Kamin, Jerry Laiserin, FAIA, Nancy Levinson, Lee Mitgang, Robert Murray, Sheri Olson, AIA, Nancy Solomon, AIA, Michael Sorkin, Tom Vonier, AIA, William Weathersby, Jr.
INTERNATIONAL CORRESPONDENTS	David Cohn, Claire Downey, Tracy Metz, Naomi R. Pollock, AIA

SPECIAL PROJECTS	Charles Pinyan, Paul Herrmannsfeldt
RESEARCH DIRECTOR	John Conkling
DIRECTOR OF PROMOTION	Deborah Smikle-Davis
FINANCE	Michael Florek, Shlomo Messinger
CIRCULATION	Maurice Persiani, Brian McGann
ADVERTISING PRODUCTION MANAGER	Stephen R. Weiss
ADVERTISING DIRECTOR	David Johnson
VICE PRESIDENT/PUBLISHER	Elaine Shusterman

EDITORIAL OFFICES: 212/904-2594 Editorial fax: 212/904-4256 E-mail: *rivy@mcgraw-hill.com.*
Two Penn Plaza, New York, N.Y. 10121-2298
WEB SITE: www.architecturalrecord.com
SUBSCRIBER SERVICE: 888/867-6395 (U.S. only). 609/426-7046 (outside the U.S.). Subscriber fax: 609/426-7087.
E-mail: *p64ords@mcgraw-hill.com.* AIA members must contact the AIA for address changes on their subscriptions.
800/242-3837. E-mail: members@aia.org.
INQUIRIES AND SUBMISSIONS: Letters, R. Ivy, *rivy@mcgraw-hill.com*; Lighting, C. Linn, *linnc@mcgraw-hill.com*; Books, C. Pearson, *pearsonc@mcgraw-hill.com*; Record Houses and Interiors, S. Amelar, *sarah_amelar@mcgraw-hill.com;* Practice, E. Kubany, *elizabeth_kubany@mcgraw-hill.com*; Products, R. Catinella, *rita_catinella@mcgraw-hill.com;* News, J. Czarnecki, *john_czarnecki@mcgraw-hill.com;* Web Editorial, K. Lerner, *kevin_lerner@mcgraw-hill.com*

SUBSCRIPTION: Rates are as follows: U.S. and Possessions $59; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $8; for foreign $10. Subscriber Services: 888/867-6395(U.S. only); 609/426-7046 (outside the U.S.); fax: 609/426-7087.
SUBMISSIONS: Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage.
SUBSCRIPTION LIST USAGE: Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, N.J. 08520.
OFFICERS OF THE MCGRAW-HILL COMPANIES: *Chairman, President and Chief Executive Officer:* Harold McGraw III. *Executive Vice President and Chief Financial Officer:* Robert J. Bahash. *Executive Vice President, Organizational Effectiveness:* Barbara B. Maddock. *Executive Vice President, Global Markets:* John D. Negroponte. *Senior Vice President and General Counsel:* Kenneth M. Vittor. *Senior Vice President, Corporate Affairs, and Assistant to the President and CEO:* Glenn S. Goldberg. *Principal Operating Executives:* Leo C. O'Neal, *President, Standard & Poors;* Vasant Prabhu, *President, Information and Media Services;* Robert E. Evanson, *President, Educational and Professional Publishing Group.*
MCGRAW-HILL CONSTRUCTION INFORMATION GROUP: Norbert W. Young, Jr., FAIA, *President*

COPYRIGHT AND REPRINTING: Title ® reg. in U.S. Patent Office. Copyright © 2000 by The McGraw-Hill Companies. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, Mass. 01923. To photocopy any article herein for personal or internal reference use only for the base fee of $1.80 per copy of the article plus ten cents per page, send payment to CCC, ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, N.Y. 10121-2298; fax 212/904-4256. For reprints call 609/426-5129 or fax 609/426-7087. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because the possibility of human or mechanical error by our sources, The McGraw-Hill Companies or ARCHITECTURAL RECORD does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions therein or for the results to be obtained from the use of such information of for any damages resulting therefrom.

PRINTED IN USA

Architectural Record
McGraw-Hill Construction Information Group
A Division of The McGraw-Hill Companies

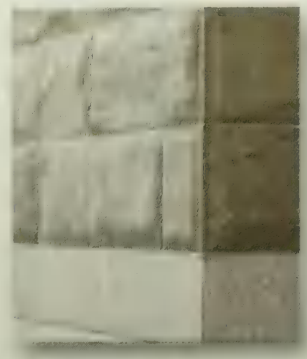
ABC MPA

THE AMERICAN INSTITUTE OF ARCHITECTS 2000 BOARD OF DIRECTORS • OFFICERS: *President:* Ronald L. Skaggs, FAIA; *First Vice President:* John D. Anderson, FAIA; *Vice Presidents:* Linda Searl, FAIA, Gordon H. Chong, FAIA, J. Richard Kremer, AIA; *Secretary:* Stephan Castellanos, FAIA; *Treasurer:* Harry Rutledge, AIA, RIBA • **REGIONAL DIRECTORS:** Roy Abernathy, Assoc. AIA, Jerry E. Abramson, Harold L. Adams, FAIA, RIBA, JIA, John Reid Benson, AIA, Bruce E. Blackmer, AIA, Derek Bradford, AIA, RIBA, ASLA, Timothy G. Cahill, AIA, Stephan Castellanos, AIA, Lugean L. Chilcote, FAIA, Donald M. Comstock, AIA, John F. Corkill Jr., AIA, Ben R. Darmer, FAIA, Richard Farson, Ph.D., Thomas G. Fernandez, AIA, Richard L. Ford Jr., AIA, John P. Franzen, AIA, James Gatsch, AIA, Holly K. Gerberding, AIA, Eugene Hopkins, FAIA, Timothy D. Kent, CAE, Edward Kodet Jr., FAIA, Lawrence R. Livergood, AIA, Kenneth Maynard, FAIA, David Messersmith, FAIA, Melissa Mileff, Barbara A. Nadel, FAIA, Robert L. Newsom III, FAIA, Thompson E. Penney, FAIA, Michael L. Prifti, AIA, Angel C. Saqui, FAIA, Larry M. Schneider, AIA, Katherine L. Schwennsen, AIA, Wayne D. Silberschlag, AIA, Bill D. Smith, FAIA, Marvin J. Sparn, FAIA, Douglas L. Steidl, FAIA, Ward Whitwam, AIA, David L. Wooley, AIA, Steven Winkel, FAIA; *CACE Representative:* Timothy D. Kent, CAE; *AIAS Representative:* Melissa Mileff • **AIA MANAGEMENT COUNCIL:** Norman L. Koonce, FAIA, *Executive Vice President/CEO;* Jim Dinegar, *COO;* Richard J. James,*CFO;* Chuck Hamlin, *Managing Director, AIA Communications;* Brenda Henderson, *Managing Director, AIA Component Relations;* Dale R. Ellickson, FAIA, *Managing Director, AIA Contract Documents;* Lisa Blackwell, *Managing Director, AIA Government Affairs;* Laura Eide, *Managing Director, AIA Human Resources;* Kimberly Allen, *Managing Director, AIA Knowledge Center;* Kenna Wood, *Managing Director, AIA Marketing and Research;* John Gaillard, *Managing Director, AIA Meetings and Events;* Nancy Somerville, Hon. AIA, *Managing Director, AIA Membership Systems;* Michael Copp, *Managing Director, AIA Professional Practice;* Helene Combs Dreiling, FAIA, *Managing Director, AIA Stakeholder Relations;* Philip D. O'Neal, *Managing Director, AIA Technology.*











*Trademarks of The Dow Chemical Company
†The color BLUE is a trademark of The Dow Chemical Company



At least the insulation is a no brainer.

Decisions. Decisions. Decisions. Selecting what looks and works best for your customers is a big part of your job. Which can get a little mind-boggling considering all the choices you have out there. At least with Dow STYROFOAM* brand insulation, your choice for rigid insulation is easy. It's the brand professionals continually choose over other comfort and energy-saving options. Not only because it's a proven performer, but also because using it results in a well-built, energy-efficient structure. So when it comes time to think about your best insulation choice, don't give it another thought. Choose BLUE.†

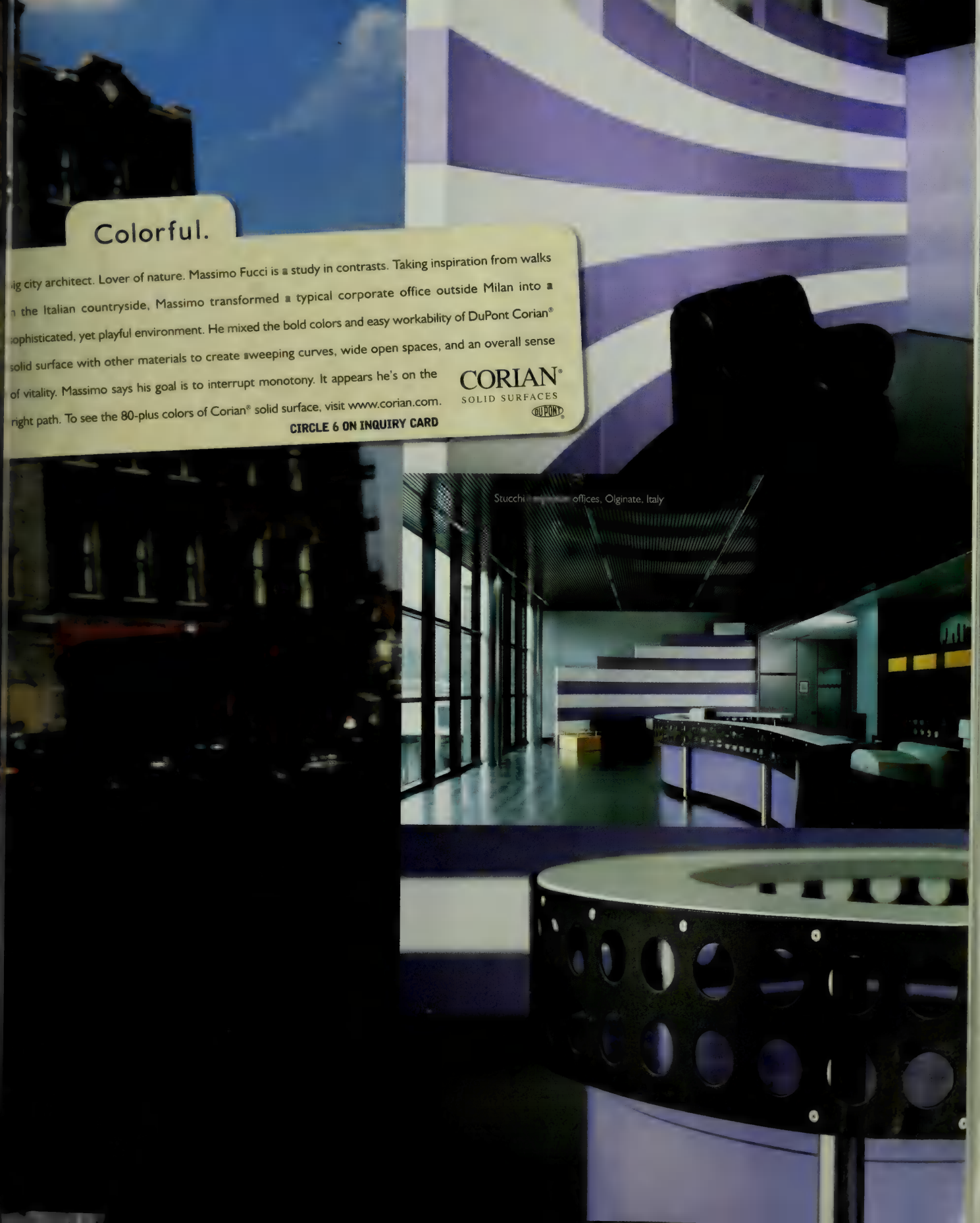
Dow

Styrofoam
Brand Insulation

The Preferred Choice!
www.styrofoam.com

CIRCLE 5 ON INQUIRY CARD

Shown in Lilac, Sun, Everest, Black Quartz, Pyrenees and Midnight. Corian® is a DuPont registered trademark. ™ DuPont makes Corian.®



Colorful.

ig city architect. Lover of nature. Massimo Fucci is a study in contrasts. Taking inspiration from walks n the Italian countryside, Massimo transformed a typical corporate office outside Milan into a ophisticated, yet playful environment. He mixed the bold colors and easy workability of DuPont Corian® solid surface with other materials to create sweeping curves, wide open spaces, and an overall sense of vitality. Massimo says his goal is to interrupt monotony. It appears he's on the right path. To see the 80-plus colors of Corian® solid surface, visit www.corian.com.

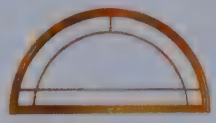
CORIAN®
SOLID SURFACES
DUPONT®

CIRCLE 6 ON INQUIRY CARD

Stucchi offices, Olginate, Italy

Always sign your work.





It's your legacy. Define it with boundless colors, shapes and styles. Let us help you transform light into emotion. Shadow in

©2000 Weather Shield Mfg., Inc.



Weather Shield
Windows & Doors

CIRCLE 7 ON INQUIRY CARD

er into inspiration. Our windows and doors. Your mark. Call 1-800-477-6808 x2341 or visit us at weathershield.com See the light.™



Why would you use any other exterior sheathing product

With Dens-Glass® Gold, there's absolutely no reason to risk your reputation on any other exterior sheathing product. Simply put, Dens-Glass Gold from G-P Gypsum Corporation, is superior in every way. It has a 10-year substrate warranty provided on commercial EIFS projects, it's non-combustible and ASTM 136 compliant. And not only has Dens-Glass Gold maintained optimum performance for over 14 years, it's been proven 99.999% defect free



years Dens-Glass Gold has been proven in places like this?

se there's also the fact that Dens-Glass Gold is lightweight and easy to cut with a utility
o next time you find yourself wondering which exterior sheathing product would best suit
eds, think about the options. Then think Dens-Glass Gold. Proven. Reliable. And simply superior.

GP
Georgia-Pacific

CIRCLE 8 ON INQUIRY CARD

© Copyright 2000 Autodesk, Inc. Autodesk is a registered trademark and iDesign is a trademark of Autodesk Inc. in the U.S. and other countries.



iDESIGN™

SUDDENLY YOUR THINKING BECOMES POSITIVELY LUMINOUS.

Never have your ideas blossomed so brilliantly. Never have the boundaries of architectural design been broken down so willingly. And never has there been a creative environment so open to innovation. Now Autodesk combines the potential of the Internet with exceptional new design technologies to help you realize your very own vision. See what iDesign can do for you: www.autodesk.com/bloom.

autodesk®



The keys to the kingdom

Editorial

By Robert Ivy, FAIA

Who owns the keys to the interiors kingdom? Currently, interior designers are engaged in a full-court press to achieve licensure, with legislation planned or pending in a number of states. In California, the question is imminent: an interiors practice bill has passed the legislature there and is headed for the governor, though with no guarantee of signature. If you're not familiar with the terms, interior designers are seeking ***practice*** *acts, which regulate professions such as architecture, as opposed to* ***title*** *acts, which merely grant the ability to use the formal designation. Until recently, interior designers were largely an unregulated body of roughly 200,000 persons, but their leading organizations, the ASID and the IIDA, want that changed.*

The topic is fraught with dissension. First, the stakes are large: the fees alone in the industry well exceed $1 billion. Architects, who routinely work with interior designers, take opposing points of view. For some, particularly those larger firms heavily engaged in interior design, the question is one of the marketplace and inevitability. But architects are heavily invested in interiors, and their numbers are growing—84 percent of all AIA member firms offer interior design and space-planning services, up from 73 percent in 1996, according to the latest AIA firm survey.

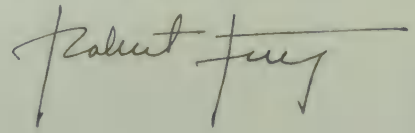
In recognition of the gravity of the situation, the AIA convened a task force in 1999 to investigate. They found that interior designers seek to distinguish themselves from less-qualified decorators, protect the right to practice, establish gender equity in a field dominated by men, and earn the respect of their fellow professionals. It sounds good and right, but are their reasons valid enough to warrant licensure? Michael Stanton, former president of the AIA, adds a fifth reason, that interior designers want to increase their share of the burgeoning market.

The designers' point of view is consistent. When this magazine convened a panel of interior designers in April 1998, we heard a clear message: despite their gains in the industry, they feel slighted or disparaged by architects. However compelling their reasons, there are unavoidable differences between architects and interior designers. Architectural education is more rigorously focused on life safety, as well as structure, building science, and codes. By contrast, the AIA task force reported that in the 125 interior design programs currently available, education can vary from two to four years, and current testing for certification focuses more on aesthetics than safety.

The differences do not stop with pedagogy. Architects tend to engage the entire design problem, considering not only the contents of the interior, but the interior's relation to the exterior envelope, its construction and building systems, and the natural and human-made surroundings. A healthy building—light-filled, safe, and promoting human habitation—should be architects' professional norm. When we are operating at a high level of accomplishment, our work is holistic, integrating complex technical systems and social requirements into structures that engage the landscape, sustain their inhabitants inside and out, and enrich the community.

While we may feel sympathy for our working colleagues, practice legislation may not be the panacea that interior designers seek, if it is achieved without commensurate, fundamental changes in the education and experience of interior designers. A new name and a new law would not automatically confer new status, whatever the legislative outcome.

Most architects hate conflict, particularly with our collaborators. We consider turf wars to be petty and unworthy of women and men called to higher pursuits. We set high goals for our work and for our clients, and we achieve them, in part, through cordial relationships with interior designers. If interior designers have legitimate grievances, we must correct our own errors and help where we can; but it would be a mistake to assume that practice law will serve as an automatic panacea for them. Our own professional status reflects a public trust we have earned at high cost, and it should not be diluted.



Oh, the Housing



Kingsboro Towers
Gloversville, N.Y.
Leonard Feldman

Fairmont Hotel
San Jose, Calif.
HOK San Francisco

...of precast, prestressed concrete. It's the design community's most versatile material, both in structural and architectural construction. Proven time and again in apartment houses and single-family homes, hotels and motels, dormitories, healthcare and retirement facility applications...precast, prestressed concrete has found a home in housing.

Dominican College
Residence Hall
Orangeburg, N.Y.
Einhorn Yaffee Prescott P.C (EYP)

1-800-947-8800 · www.pci.org

Design Possibilities...



Scattered-Site Housing
Chicago, Il.
Piekarz Associates P.C.
Architects

East 111th & 112th Street
Partnership Homes
New York, N.Y.
Danois Architect

UHL STUDIOS

To learn more on how precast, prestressed concrete applications can meet your needs in housing design, call 800-947-8800 and ask for a FREE copy of our 16-page informative brochure.

The Precast/Prestressed Concrete Institute is the international association of certified producers, professionals and suppliers to the industry. PCI, an American Institute of Architects Registered Provider, works closely with architects in delivering tomorrow's reality from today's dreams.

Precast Concrete...Your Design Option!

pci

PRECAST/PRESTRESSED CONCRETE INSTITUTE

209 West Jackson Boulevard
Chicago, IL 60606
E-Mail: info@pci.org

CIRCLE 7 ON INQUIRY CARD


Courtney Sloane
President & Creative Direct
Alternative Design

There's a

ing of the

d. The voice of the new mainstream is diverse.

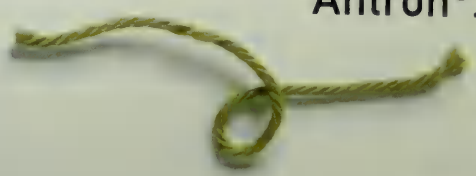
We have to catch it, tap into it,

and show what time it is.

Courtney Sloane

DUPONT

Antron®. Innovate.



CIRCLE 10 ON INQUIRY CARD

Learn more about Courtney Sloane and DuPont Antron® nylon carpet fiber at www.dupontcommercial.com

Antron® is a DuPont registered trademark for its brand of nylon carpet fiber. Only DuPont makes Antron®. ©2000 DuPont

Letters

Architecture or sculpture?
The Experience Music Project in Seattle [AUGUST 2000, page 126] has been an instant love-hate relationship. The reason is simple. This is not so much a piece of modern architecture as it is a work of sculpture.

Architecture is based more on a didactic Marxist philosophy of thesis, antithesis, and synthesis. Divergent elements have to be integrated into a working building, and compromises are often required in order to reach a working solution. Generally, any successful building has to combine function, aesthetics, financial considerations, environment, structure, and social factors. A typical building is friendly to its neighbors. Gehry's sculpture is just the opposite. Totally independent, it follows the pattern of other "sculptures" in Bilbao or the one proposed for Manhattan. The same form and plan fit anywhere. With its total lack of fenestration, the building should logically go underground, then have a pure sculpture on top.

Only time will tell whether EMP will survive as a great statement of our time or if it will be demolished as an obnoxious, ugly blip, to be replaced by a bland but permanent building.
—George A. Hartman
via E-mail

You've got junk mail
After five years of schooling, over three years of internship, nine exams, countless fees, and a mile of paperwork, I finally completed all the steps to become registered as an architect in my state. Even before receiving word from the AIA that my membership had been upgraded from the Associate's status, I began receiving all of the junk mail I am accustomed to, only addressed to me with my new "AIA" suffix. What a relief that the AIA's priorities are straight, and there will be no lapse in the endless credit-card offers. I challenge the AIA to practice what it preaches and conserve natural resources by ending the excessive, wasteful junk mailing.
—James A. Mehaffey, AIA
Lancaster, Pa.

Imitated modernism
As an instructor in Design and Theory for UC Berkeley Extension, I am particularly interested in the transmission of the kind of knowledge that helps others to imagine and create. I could not agree more with Denari's comments on the importance of the awareness of the Other in the creation of great architecture [JULY 2000, page 59]. However, I would take this comment quite a bit further.

All mankind can do, ultimately, is attempt to emulate the reality that surrounds us. I would state emphatically, to paraphrase Plato, that all art is imitation. The greater the artist, the more sophisticated the imitation. With due respect to Denari's media recognition, he is nothing if not a great imitator. The fluid nature inherent in late-20th-century industrial design, from hair dryers to automobiles, is unquestionably a formal source for all his mostly unbuilt work.

I think it's great that Denari and a few other mostly unbuilt architects have chosen to copy the innovations of industrial designers. Architecture needs to break out of the box.

Another source of this imitation, of course, is the Baroque. I am currently at work on a book that dwells on the relationship of the move toward the organic that underlies the decay of a specific orthodoxy, in this case modernism. Gehry, Eisenman, and a host of younger architects such as Denari are partners in this search for a fluid, organic, ultimately "baroque" extension of classical Modernism.
—David Kesler
via E-mail

Deep thoughts
I have been reading your editorials since graduate school (NC State '98) and have really enjoyed your choices of topics and the ideas posed to everyone in the profession. I often post a copy of your monthly "food for thought" in our office kitchen, and recently have been sending an office-wide E-mail linking directly to your editorial page. July's editorial ["Gone digital," page 17] was of particular interest and has become a generator for a lunchtime discussion. You are definitely addressing the major issues in the profession and making us think for a change.
—Jeffrey Resetco, Associate AIA
New York City

Letting the Tiger out
I want to tell you how much I admire you for publishing the Stanley Tigerman interview [JUNE 2000, page 65]. It needed to be said and you recognized and allowed it. I salute your courage and ethics!
—Betty Meyer
Auburndale, Mass.

To market, to market
I'd like your professional opinion on an idea that I've had in mind for several years. After reading your current editorial, "Tempus fugit," [AUGUST 2000, page 17] I believe you may be able to help. The article encourages your fellow architects to ask such questions as, "For whom are you building? For what purpose? How does the design relate to the present moment? What will be its legacy?"

Can and should the design process transform the souls of the participants, just as the building has the potential to transform the souls of the occupants? Can the process leave a legacy?

I see an opportunity for organizational development to be blended with the discipline of architecture to create a new architectural design process that embraces architecture and the building's role from a broader perspective. This perspective goes beyond function and form to include organizational systems inquiry. Should we challenge the profession to ask questions such as: How can the design process help the organization and its people? How will the building's design support the core mission, vision, and evolutionary process of the firm? What is the building's reason for being? How can the culture of the firm be reflected in the space plan, design, and form of the building?
—Valerie Bugni, Assoc. AIA
Lucchesi, Galati Architects, Inc.
Las Vegas

Nature as example
Thanks to RECORD for bringing its readers the idea of art in architecture. The work of Santiago Calatrava [AUGUST 2000, page 70], whom I consider the Antonio Gaudi of contemporary architecture, is both poetry and art thoughtfully interwoven within a structure of steel and glass that is wonderfully natural and noble in its inspiration.

Contrary to the ideals of Rem Koolhaas and the "School of Kool," art has a definite place in the practice of contemporary architecture. Are we not trained in drawing and painting? For Calatrava and others of his stripe, nature provides the most artful and efficient model. Though I too love "the box," there is nothing as graceful as the curves of the natural world.
—Gregory Joseph Singletary
via E-mail

Umbria or bust
I read with interest Suzannah Lessard's critique [AUGUST 2000, page 55], particularly her negative space and inside-out analogies. When I moved to Phoenix 29 years ago, the population of the entire state of Arizona was only two million.



point of inspiration

Introducing the Big Cities carpet collection from Pacificrest. Simple by design. Intricately detailed. And made of DuPont Antron Lumena® nylon via an exclusive 3-ply heat set process that twists and curls the fibers for a crisper, more tailored look with richer, more distinct texture. For other newfangled ideas in carpet made of DuPont Antron®, visit *what's new* at www.dupontcommercial.com.

Okay then, everybody boing.

CIRCLE 11 ON INQUIRY CARD

PACIFICREST MILLS

DUPONT Antron Only by DuPont

Antron® is a DuPont registered trademark for its brand of nylon carpet fiber. Only DuPont makes Antron® © 1998 DuPont

Today the Phoenix metro area alone is close to three million and covers an area bigger than Los Angeles.

Before I left Arizona last year, I was involved with a group trying to get a growth-management initiative on the ballot. During the campaign we learned that our opposition—the developers and land speculators—envisioned a contiguous corridor of development stretching 250 miles from Tucson to Sedona, with pockets of preservation here and there.

Though I do agree that landscape architects are better equipped to make sprawl livable, I don't think that sprawl as doughnut and wilderness as hole is inevitable. It only seems that way because there are so many economic incentives for sprawl and very few economic incentives for wilderness, for Umbria.

The boring suburban landscape so many detest is more a product of the mortgage-interest deduction than poor design. We wouldn't see many tilt-up industrial parks replacing farms if city land were taxed at the same rate as country land. And no sane business would want to be in that country setting if there were no federally subsidized highway going there.

Let's not throw out the old model—the built world surrounded by wilderness—until we first root out the economic incentives for sprawl. If there were no profit in sprawl, developers would be praising infill, reurbanization, and compact design.

—Pete Chasar
Brookings, Ore.

Not just for books

Since the design was first revealed last December, the Seattle Central Library [AUGUST 2000, page 121] has been the object of much discussion, criticism, and praise. It has changed little in the eight months since then. It is not a very lovable building; it is not even a very likable building. Its distinctive form is generated by shifting the building mass to the north and west as the building rises and then back again. Its exterior enclosure is entirely metal and glass.

It may be that liking it requires a new aesthetic perception. The new in art and architecture has always been difficult to accept. We may come to like buildings that look like enormous metal-and-glass sculptures. It just seems that a major building for a large city should have immediate appeal.

It was interesting to note that the next article in August was the Experience Music Project a few miles from the Central Library site. Set outside the downtown area next to an amusement park, the EMP is surprisingly consistent with its forms and colors. To think of it as context for the Central Library is nonsense. The Central Library's context should be the new City Hall that is now in design for a location a few blocks away.

—Paul Dermanis, AIA
Seattle

Corrections

RECORD would like to thank the AIA for helping to arranging interviews with the seven mayors profiled in our June feature, "The Principals of Smart Growth" [page 76]. In the July "Practice Matters" column [page 57] Lorna Parsons was incorrectly identified as Donna Parsons, and CNA/Victor O. Schinnerer & Company was incorrectly identified as CNI/Victor O. Schinnerer & Company. In the July issue [News, page 30] the image of PB6 on the lower-right corner should be credited to illustrator Steve Oles, FAIA, as well as Pei Cobb Freed. Also, the image is printed in reverse.

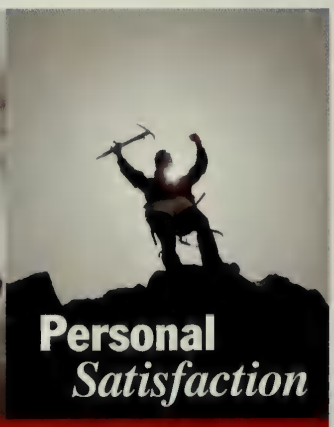
Letters may be E-mailed by clicking ***Letters*** *on our Web site at* ***www.architecturalrecord.com****, or send letters directly to rivy@mcgraw-hill.com. RECORD may edit letters for grammar, style, and length.*

Have you compiled the "perfect" project manual?

Did you prepare an outline spec that helped your firm win a big contract?







Enter CSI's 2001 Specifications Competition—***the only awards program in the industry that recognizes excellence in specification writing and product literature.***

Numerous benefits await you—but you can't win if you don't enter!

- Prove your professional and technical expertise.
- Add a meaningful accomplishment to your professional resume.
- Bolster your firm's credentials when seeking new projects and new clients.

Submit entries in any of these categories:

- Project manuals
- Product binders
- Short form specifications
- Outline specifications
- Preliminary project descriptions
- Design-Build RFPs
- Design-Build response to RFPs

Visit www.csinet.org or call 800.689.2900 for all the information you need to submit your winning entry. All entries must be postmarked by *October 3, 2000*

The Construction Specifications Institute

Enter the 2001 Specifications Competition and reap the rewards.

CIRCLE 12 ON INQUIRY CARD



WHY INDIANA STATE UNIVERSITY RELIES ON SLOAN SHOWERHEADS

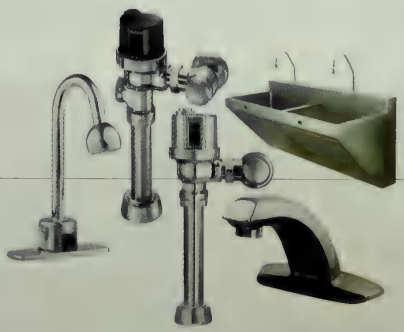
"I installed Sloan's Act-O-Matic® self-cleaning showerheads on the insistence of my Sloan Sales Representative. They worked so well, I now spec the showerheads for the entire campus. In fact, the 2.5 gpm 'Cone-within-a-cone' showerhead sprays and feels like a 4 gpm," according to Jim Elslager, Senior Mechanical Engineer, Indiana State University, Terre Haute, IN.

"The chrome-plated, all brass showerhead virtually takes care of itself especially in our hard water system. That is important with 11,000 students. I recommend the fully serviceable Act-O-Matic not only for water savings but for comfortable showers and other features."

- The 2.5 gpm flow control meets federal and state water conservation requirements
- The Act-O-Matic disc discharges water-borne particles for greater spray efficiency and less maintenance
- Universal ball joint and thumbscrew volume control ensures increased water economy and user satisfaction
- Fits standard 1/2" I.P.S. inlet
- Models of self-cleaning, all brass showerheads available: *standard*–with or without thumbscrew and *institutional* style with integral mounting flange
- Available in four finishes

IF INDIANA STATE RELIES ON SLOAN, SHOULDN'T YOU?...Call today!

Learn more about why educational institutions recommend Sloan. Call **800-745-0800** or circle the number below for a copy of our full-line catalog/CD-ROM.



SLOAN®

Sloan Valve Company
10500 Seymour Avenue • Franklin Park, IL 60131
Phone: 800-745-0800 • Fax: 800-447-8329
www.sloanvalve.com

CIRCLE 13 ON INQUIRY CARD

In 1866, we couldn't imagine offering 144,000 styles





For a ***free brochure*** *and a dealer nearest you,*
call 1-800-238-1866 ext. C9, or visit ***www.cardaco.com***

'oday, we can't imagine anything less.

Back in 1866, our first wood windows had a lot of style.

There just wasn't a lot of variety. But today, we have

double-hung, casement, transom, radius, geometric,

awning and sliding windows, as well as patio doors.

In a huge variety of sizes. With primed wood or

aluminum-clad exteriors. In five colors. Plus a wide range of divided

lite patterns and options. That's 144,000 different choices.

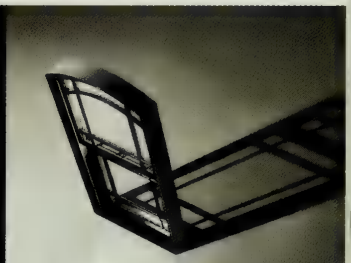
And those are just our standard windows.

So if you want to give your clients the kind

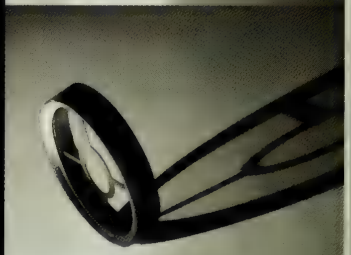
of choice they expect these days, give us a call.

We'll help you give them more than they can imagine.

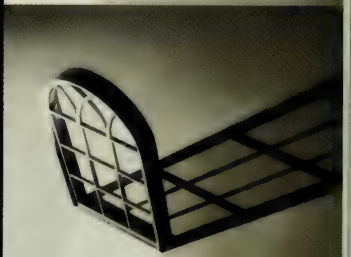
© 1996 JELD-WEN, inc. JELD-WEN and Caradco are registered trademarks of JELD-WEN, inc. Klamath Falls, OR.



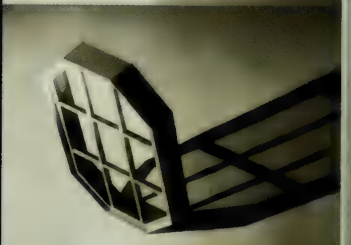
Segment Head Double-Hung



Oval



Standing Arch



Octagon

Windows for tomorrow. Since 1866.™

Caradco

Part of the JELD-WEN® family

CIRCLE 14 ON INQUIRY CARD

technology

A Tradition of Innovation Continues...

people...products...technology

T5HO

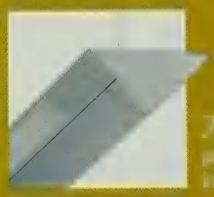
Lighting systems for architecture.

With an unmatched record of innovation, it's no surprise that Litecontrol now offers the most extensive line of products featuring the latest T5 lamp technology. By including the benefits of high performance optical systems and sleek, new fixture designs, Litecontrol offers you an extraordinary range of new lighting systems. Simple! Saturn. More output. Fewer lamps. Better distribution. Lighter design. Greater efficiency. Litecontrol now offers T5-based linear indirect lighting in pendant, wall and cove systems. All applications where T5 technology has a real advantage.



V³
asymmetric distribution
Axial wall mounted
luminaire – open

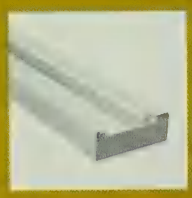
Visit us at www.litecontrol.com or ask your Litecontrol Representative for more details.



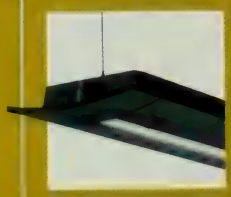
Avko
pendant mounted
indirect



MOD-22
pendant mounted
indirect



Cove-25
surface/cove
indirect



Ciros
pendant mounted
indirect/direct



Arcos &
Arcos slot
pendant mounted
indirect



Wall X³-56
wall mounted
asymmetric
indirect

LITECONTROL

LITECONTROL

100 HAWKS AVENUE, HANSON MA 02341 781 294 0100 FAX 781 293 3549

info@litecontrol.com www.litecontrol.com

CIRCLE 15 ON INQUIRY CARD

Record News

Highlights Dean shuffle p. 32
L.A. and Chicago build schools p. 34
WWII Memorial design refined p. 38
Development plans for Staples Center p. 40

Shaft for Bunshaft's modern box and Noguchi



Wilde Building and courtyard slated for demolition, and sculpture to be sold.

Two International Style buildings designed by Gordon Bunshaft of Skidmore Owings & Merrill (SOM) in the 1950s are slated for demolition in Bloomfield, Conn. Regarded as milestones of Modernism in corporate America, the structures are owned by CIGNA, which plans to redevelop the site. Although the buildings are not landmarked or protected under state or city guidelines, their proposed destruction has sparked heated community debate.

CIGNA says the buildings are now too large and costly to operate. Approximately 4,500 employees remain at the Bloomfield campus. The company has asked Bloomfield to approve a master plan, completed by Boston's Elkus/Manfredi Architects, to rezone the 650-acre campus for 10-year phased development. CIGNA will sell most of the property to commercial developers, demolishing three of four existing buildings. In their place would be office towers, a golf course, a hotel and conference center, 160 single-family homes, and 240 apartments.

The 827,000-square-foot Wilde Building, once called Connecticut General and targeted for demolition by 2003, was a departure from masonry corporate structures of its day. A mammoth steel skeleton is sheathed in a green-glass curtain-wall skin. Complementing the towering spaces and wide corridors are sculptures and four interior courtyards by Isamu Noguchi. The courtyards will be razed, while the sculpture will be offered to developers, according to CIGNA.

The second Bunshaft-designed structure under siege, the 570,000-square-foot North Building once housed Emhart Corporation. Built in 1960, it was the architect's first poured-concrete structure.

A local group of architects has begun Campaign to Save Connecticut General. Robert Stern, FAIA, SOM principal David Childs, FAIA, and directors from the National and Connecticut Trusts for Historic Preservation are supporters.

The development's potential infringement upon protected wetlands also has alarmed local environmentalists. CIGNA, meanwhile, dismisses the preservation outcry as complaints of architectural elitists. Community advocates for the development say it addresses needs for private housing and will generate more tax revenue and employment. The next challenge to the proposal is Bloomfield's review of requested zoning changes this fall. *William Weathersby, Jr.*

Patkau wins competition with modern box

Vancouver-based Patkau Architects won a competition in June to design Montreal's new main library, the Grande Bibliothèque du Québec (GBQ). To rise on a Palais du Commerce site in Montreal's Quartier Latin by 2003, the government-funded, $40 million GBQ will house noncirculating holdings of the national library of Quebec and the central library of Montreal, as well as a vast collection for public loan.

The winning design, devised by husband-and-wife team John and Patricia Patkau, is for a multilevel building combining wood, copper, and granite detailing that will feature a series of inclines to draw visitors into the heart of the space. Passengers arriving from a metro station will be able to view the lower-level children's library beyond a sunken, sunlit garden, while a ramp leads to a landing overlooking a children's theater. Proceeding up another slight incline, patrons encounter the main information desk. Patkau is teaming with two Quebec firms for the project, Croft-Pelletier and Gilles Guite. The team won the international competition against four other multifirm teams led by Christian de Portzamparc, Zaha Hadid, FABG, and Saucier + Perrotte. Hadid, who collaborated with the Quebec firm Boutin Ramoisy Tremblay, received an honorable mention. Models of all the entries may be seen at: www.grandebibliotheque.qc.ca. *WW*

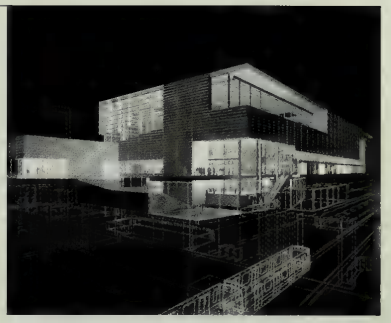


Illustration of Patkau design for library.

OFFICE BUILDING BOOM

Demand for office space continues to soar in the United States. As of midyear, 1,070 office buildings, with 123 million square feet, were under construction. The following five cities led the market in office construction:

1. **Washington, D.C.** 11.1 million square feet
2. **Boston** 7.4 million square feet
3. **Minneapolis** 7.2 million square feet
4. **Atlanta** 6.5 million square feet
5. **Dallas-Ft. Worth** 5.1 million square feet

Source: Oncor International, Washington, D.C.

OFF THE RECORD

Sen. Joseph Lieberman, the Democratic vice presidential nominee, was executive assistant in design and planning to the dean of the Yale School of Art and Architecture for three school years, 1969 to 1972. He was elected to the Connecticut State Senate in 1970, but that was a part-time gig.

A pool and gymnasium by Tod Williams Billie Tsien for the Arverne/Edgemere Houses Recreation Center in the Rockaways, Queens, New York, will be complete in 2003. Richard Burney, the new head of design at the New York Housing Authority, is hiring design-savvy architects, including Hanrahan Meyers Architects.

A winning design for the Martin Luther King Jr. National Memorial, to be located on the Mall in Washington, D.C., will be announced in mid-September.

The AIA Diversity Conference, scheduled for August in Chicago, was canceled due to low registration numbers. The first AIA Diversity Conference was held in 1994, but the conference failed to draw a critical mass in recent years. In the future, diversity workshops will be held in conjunction with allied organization conferences or state AIA events.

Steven Holl has been named architect for the $7.5 million Zachary Scott Theatre Center in Austin, Tex. The 500-seat theater will be complete in 2004. Holl is also competing with Jean Nouvel, Arata Isozaki, Cruz and Ortiz, and Juan Navarro Baldeweg for a Museum of Human Evolution in Burgos, Spain. Presentations to the jury will be made on September 17.

Due to AIA budget considerations, *AIArchitect*, the newspaper of the AIA, will be published 10 times this year rather than 12. One issue was produced for July/August, and one is planned for November/December. Publishing plans for 2001 to follow.



The library addition by Schwartz/Silver Architects will be low-slung in the back of the 1883 H.H. Richardson building. Construction begins this fall on the $6 million project.

Addition to H.H. Richardson's Ames Library wins approval after delays

After a decade-long delay, a beloved and influential 19th-century library designed by H.H. Richardson has launched a $6 million expansion and restoration program. The 1883 Ames Free Library in North Easton, Mass., a community that prides itself as the locale of five extant Richardson structures, has approved a new plan by Boston's Schwartz/Silver Architects to more than double the facility to 25,000 square feet. Construction begins in October.



The back of the 1883 Ames Library

Sited to rest partially below grade discreetly behind the original building and cleaving to a hillside, the addition takes its inspiration from adjacent parcels of land acquired by the town, which contain ruins of 19th-century Italianate gardens. Meeting halls and a lecture auditorium will be articulated as stone-clad garden sheds, with new book stacks set underground to alleviate overcrowded shelves upstairs.

The building program is the result of an unusual public/private funding initiative. Although it functions as a civic building, the Ames Free Library is actually privately owned, originally commissioned by the philanthropic Ames family, who built their fortune through a local tool and shovel works during the Civil War and Gold Rush. Ames endowments covered most library maintenance and operating costs for more than a century.

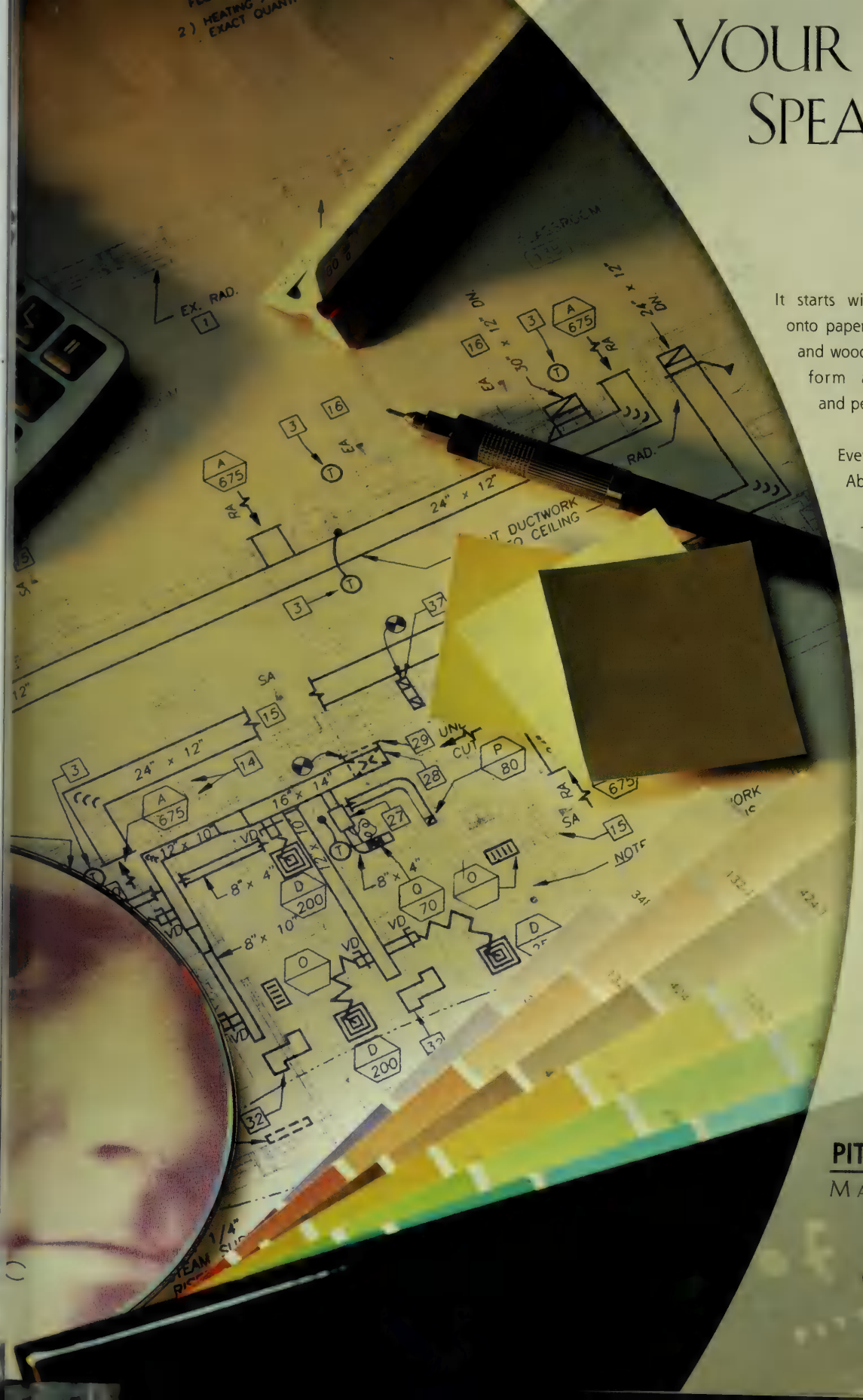
Now a $1.9 million Massachusetts state grant to help renovate and expand the library has forced a complex shift in the institution's funding, while the town has also earmarked $3.1 million toward the project. The expansion plan also had to comply with guidelines governing a $20 million private endowment supporting the library. To facilitate the project, Schwartz/Silver's addition is mostly on public land. The library directors have opted to lease the corresponding footprint of land to the town for newly built areas that fall within the original property lines.

Potential additions have languished on the boards for decades. A proposed 1996 addition by Venturi Scott Brown proved too controversial and the architect resigned the commission. The site remained too constraining for a feasible expansion layout until the town's recent purchase of land.

Second-phase restoration of the historic building, pending final funding, has been designed by Albert Righter & Tittmann Architects. The landscape architect, Richard Burck Associates, will integrate old and new gardens. *WW*

No, Mickey! Disney guilty of fraud for taking idea of architect, umpire

A Florida jury ruled August 11 that Walt Disney Company must pay an architect and a retired baseball umpire $240 million in damages for taking their idea to build a sports-themed park in Florida. Disney's Wide World of Sports complex is too similar, ruled an Orlando, Fla., circuit court jury, to a concept pitched to Disney in the late 1980s by architect Edward Russell of Fonthill, Ont., and ex-umpire Nicholas Stracick of Buffalo, N.Y., and their company, All Pro Sports Camps Inc. Johnnie Cochran, Jr., represented All Pro, which had sought $1.5 billion. Disney was found guilty of fraud, fraudulent misrepresentation, misappropriation, and conspiracy to misappropriate. Disney rejected the All Pro plan in 1989 but built its Wide World of Sports complex in 1997. In 1996 a U.S district court judge had ruled against All Pro, saying plans were not "substantially similar." ***John E. Czarnecki, Assoc. AIA***



Your Work Speaks For Itself

It starts with a vision, finds its way onto paper, takes its final form in steel and wood and glass. A combination of form and function. Aesthetics and performance.

Every design makes a statement. About you and your firm.

That's why *Pittsburgh*® Paints offers you a full array of professional specifier support services: A comprehensive, high-performing product line. An experienced technical field team, along with dedicated phone line support. The vast resources of PPG – a global leader in coatings and glass technology. Plus innovative color systems designed to make color selection easier – and more expressive – than ever. So make a statement.

Make it loud and clear.

PITTSBURGH® PAINTS

MAKE A STATEMENT

1-888-PPG-SPEC
www.pittsburghpaints.com

CIRCLE 16 ON INQUIRY CARD

PPG

OFF THE RECORD

Milwaukee may become the American mecca for works by Santiago Calatrava. A private developer is proposing a 25- to 50-story downtown luxury condominium tower and has tabbed Calatrava as architect. The developer will conduct market research to determine demand for high-end condos, which will drive the building's start date, likely 2001, and eventual size. Calatrava's Milwaukee Art Museum addition is under construction, and he is working on three other Brewtown projects: a classroom and gymnasium building, a footbridge, and a skywalk connecting the convention center.

Ove Arup, the engineering firm that designed the swaying Millennium Bridge in London, has put its best minds to testing bras. In order to measure "stress analysis" on bras for Bioform, Arup created a computer model to test variations of stress and stretch on a normal bra. Based on the Arup analysis, designers are developing "a more complex three-dimensional shape with rounded edges" providing "properly engineered support."

The University of New Mexico (UNM) School of Architecture and Planning named Andy Pressman, as director (equivalent of chair) of the architecture program. Steve Schreiner, formerly director at UNM, is the new director (equivalent of dean) of the University of South Florida School of Architecture and Community Design.

Returning to work in housing, former Department of Housing and Urban Development Secretary Henry Cisneros has formed a joint venture with Kaufman & Broad Corp., Los Angeles, one of the nation's largest home builders. Together, Cisneros and Kaufman & Broad Corp. will launch American CityVista program to develop large-scale residential communities in major cities, targeting low-income areas. ■

Musical chairs: Who wants to be dean?

Nearly one in seven of the 110 accredited architecture schools in the United States will begin the school year with either a search for a dean or a new one in place. RECORD research found:

Schools searching for a dean

Ten schools of architecture are currently searching for a new dean. At least one school will name a dean this month, but another is beginning its second search attempt.


Bennett


Weaver


Awotona


Drummond


Mugerauer


Kurze

Ball State University

The College of Architecture & Planning plans to have a new dean by March 2001. The school will begin reviewing candidate credentials in November. **Jeffrey Hall** is the interim dean.

The Cooper Union

The Irwin S. Chanin School of Architecture is beginning a search and hopes to have a new dean in place by the school's spring NAAB accreditation review. Former dean **John Hejduk, FAIA**, retired on June 1 and died of cancer in July.

Drexel University

A new dean of the College of Design Arts will be named this month. **David Raizman** has served as interim dean.

New York Institute of Technology

The School of Architecture & Design plans to name a dean as soon as possible, but it is still interviewing candidates. The interim dean is **John di Domenico**.

SUNY Buffalo

A new dean is expected to be named for the School of Architecture & Planning by the end of the year. The interim dean is **John B. Sheffer II**.

University of Arkansas

Jeff Shannon will be interim dean for the next two school years, as a search for a dean of the School of Architecture gets under way. The former dean, **Dan Bennett, FAIA**, left to be dean at Auburn University.

University of Cincinnati

The School of Architecture & Interior Design—in the early stages of its search—is creating a list of dean candidates. Dean **Jay Chatterjee, Assoc. AIA**, will remain in his position until a new dean is selected.

University of Florida

A search for a dean of the College of Architecture has not begun. The former dean, **R. Wayne Drummond, FAIA**, left to be dean at University of Nebraska. The interim dean is **Jay Stein**.

University of Texas at Arlington

The second attempt at a search for a dean of the School of Architecture has begun, and the school is aiming to name a new dean by fall 2001. The school completed one search process already but did not extend an offer for the position. The interim dean is **C. Lee Wright, AIA**.

University of Texas at Austin

The School of Architecture is in the early stages of its search and has conducted a few interviews. **Lawrence Speck, FAIA**, resigned as dean in 1999 but will remain in that position through the next school year.

Meet the new deans

At press time, six schools had named new deans, two of whom had been deans at other schools. The University of South Florida named a director, rather than a dean, for its school (see left column).

Auburn University

Dan Bennett, FAIA, is the former the dean of the School of Architecture at the University of Arkansas.

Savannah College of Art & Design (SCAD)

Crystal Weaver, ASID, is the former the chair of interior design department in the college's School of Building Arts.

Southern University and A&M College

Adenrele Awotona, Assoc. AIA, was interim dean of the School of Architecture this past year.

University of Nebraska

R. Wayne Drummond, FAIA, is the former dean at the University of Florida College of Architecture. Drummond replaces **W. Cecil Steward, FAIA**, who remains at the school as a professor.

University of Washington

Robert Mugerauer most recently taught at the University of Texas at Austin. The former dean, **Jerry Finrow, FAIA**, remains at the school and is on sabbatical leave until September 2001.

Woodbury University

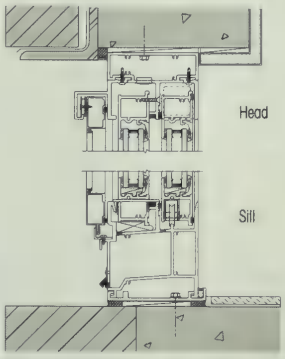
Heather Kurze taught at Southern California Institute of Architecture (SCI-Arc), where she was director of undergraduate programs from 1992 to 1998.

Amy Simonovski and John Czarnecki



CHOOSE EFCO® SLIDING DOORS FOR SMOOTH OPERATION AND DURABLE CONSTRUCTION.

Bring the outdoors inside with the panoramic views and easy operation provided by sliding glass doors. EFCO sliding doors give you smooth, easy operation due to our heavy-duty sashes and steel ball bearing rollers on a raised sill track.



EFCO high performance doors are made to guard against air and water infiltration for a more comfortable environment. Thermal models provide even greater energy efficiency. For air circulation, sturdy aluminum screens glide easily along the top roller track. And heavy-duty locking hardware and antilift devices offer an extra measure of security against intrusion.

EFCO sliding doors come in our complete array of standard colors or unlimited custom shades. Certain models even allow different colors on the inside and outside frames. For more information on our comprehensive line of products, contact your EFCO representative, call EFCO direct at 1-800-221-4169, or visit our Web site at www.efcocorp.com.



Products: EFCO Series 3001 and Series 3005 Sliding Doors, Series 3550 Horizontal Sliding Windows, Series 3950 Fixed Windows

Architect: John M. Senkarik & Assoc.

Building: Holiday Isle Towers, Destin, FL

Erector: City Glass Co., Inc.

©1999 EFCO Corporation

EFCO®

WINDOWS
CURTAIN WALLS
ENTRANCES
STOREFRONTS

CIRCLE 17 ON INQUIRY CARD





South East High School by Gonzalez/Goodale Architects (above) and the Center for Science Learning by Morphosis (right) are part of L.A.'s ambitious school-building program.

L.A. schools embark on five-year building blitz

A Los Angeles Unified School District (LAUSD) construction program promises to be a bonanza for architects. Beginning this year and continuing through 2005, the district will have 200 construction projects under way, at a projected cost of $1.2–1.9 billion. The 200 projects comprise many new buildings, including 72 elementary schools, 9 middle schools, 16 high schools, and 4 continuation transitional schools. The five-year construction program is the first portion of the district's 10-year goal of an estimated $9 billion worth of building projects.

The district has completed a request for qualifications (RFQ) process for architecture firm selection and intends to award at least one school project to each of the short-listed firms this school year. Ten firms have been short-listed for middle- and high-school design contracts and 59 for elementary schools. Another RFQ process will be held to select more firms for middle and high schools.

"In the past, certain firms did most of the work for the district," says Marvin Taff, a former partner at Gensler and a design consultant to the LAUSD. "Now we're trying to make sure we simply select the very best architects." Taff promises "no cookie-cutter schools."

"The designs have to reflect our desire to reform instruction," says Jackie Barham, the LAUSD official responsible for articulating the district's educational needs.

For example, besides classrooms, inner-city schools will have learning areas to cater to the child's "instructional family," which includes teachers, tutors, and family members. Schools near medical centers will have research laboratories.

Because the district failed to secure new sites during the last two decades, nearly one-fourth of the new schools will be carved out of existing noneducational structures. Sites under consideration include a former aircraft factory and an office building housing the Department of Water and Power.

A school designed for an expanding curriculum and adaptive reuse is Morphosis' addition to, and reconfiguration of, the 1912 Armory building in Exposition Park. Beginning in fall 2001, a K–5 elementary school will share this 196,000-square-foot facility with the Center for Science Learning. *David Hay*

Chicago's new public schools: $2.6 billion program delivered with managing architect

An expedited building-delivery system allowed Chicago Public Schools (CPS) to complete a number of projects in a short period of time, giving the city schools a new look.

Since 1996, renewal of Chicago's 591 schools comprises 29 additions and 13 new buildings completed or under construction. The $2.6 billion program, continuing through 2003, includes new construction, additions, and renovations for more than 100 schools overall.

The impetus for the physical changes to Chicago's schools began in 1993, when the Chicago Board of Education formed an advisory committee to set design criteria and engaged the local architectural firm DeStefano and Partners to develop prototypical components that would meet standards of economy, flexibility, adaptability, and expandability. The firm presented two configurations comprising classrooms, library, administrative space, gymnasium, and a cafeteria/multipurpose area.

Two elementary schools based on the DeStefano plans were built. In 1995 the Illinois General Assembly granted the mayor's office authority over the CPS, which accelerated the capital-improvement campaign. The city privatized the school design and construction-management process in 1996, handing managing architect duties to DeStefano and Partners for the next four years.

This year, DeStefano and Partners opted out of the project, and OWP&P Architects, which had been overseeing the renovation of existing school buildings, was named managing architect for new construction projects.

To address issues of expedience and inclusion, DeStefano and Partners preordered steel, elevators, and kitchens, and developed a transfer package of half-completed construction documents to be handed to the architect of record for each project. A management-delivery system enabled the architects of record to stick to a project schedule of 20 to 22 months.

DeStefano and Partners design partner John Albright says, "By the time we transferred [the half-completed construction document package] to the architects of record, the building had been massed and sited, the floor plans had been configured, and construction documents were at 50 percent. All the interior finishes were nonnegotiable." *Tom Connors*





Sandoval Elementary School (right) and Lavizzo Elementary School (below) by DeStefano and Partners.



PHOTO CREDIT MAXWELL MACKENZIE

Key Characteristics

abrasion resistant–rated for heavy duty commercial use

floor tiles available in both standard & slip-resistant finish

slip resistant exceeds ADA standards

unaffected by UV light

frost resistant

environmentally friendly; made with all natural materials

chemical resistant

waterproof

floor tiles are also suitable for walls

easy to maintain

stain resistant

imagine what you can do with IT

Pacific Blue installed on the walls at a corporate café in Florida.

For information on stock tiles and our custom capabilities, please call Imagine Tile or visit our website

1.800.680.tile

www.imaginetile.com

CIRCLE 18 ON INQUIRY CARD

imagine tile

Mies van der Rohe Prize awarded to State Pinoteca, a museum by Mendes da Rocha

The biannual Mies van der Rohe Prize for Latin American Architecture was awarded this past June to the State Pinoteca in São Paulo, Brazil, designed by Brazilian architect Paulo Mendes da Rocha, with associates Eduardo Argenton Colonelli and Welinton Ricoy Torres.

Established in 1988, the prize is sponsored by the Mies van der Rohe Foundation in Barcelona, which promotes cultural interchange between Europe and Latin America. The foundation has its ceremonial headquarters in the reconstructed Barcelona Pavilion and is backed by the city of Barcelona and other local and Spanish institutions.



Exterior of State Pinoteca, with interventions such as removed window frames.

Mendes da Rocha's design is a free and contemporary adaptation of a century-old school in São Paulo's historic center, in which original patios are roofed in glass and high catwalks bridge vaulted spaces. Born in 1928, Mendes da Rocha designed the Brazilian Museum of Sculpture in São Paulo (1995) and the Serra Dourada Stadium in Goiânia, Brazil (1975).

The other five finalists for the prize were a beach house in Lima, Peru, by Alexia León; the Reuter House in Cachagua, Chile, by Mathias Klotz; a union vacation resort in Ytú, Paraguay, by José Luis Ayala, Alberto Marinoni, and Solano Benítez; the Manantiales Building in Santiago, Chile, by Luis Izquierdo, Antonia Lehmann, José Domingo, and Raimundo Lira; and the School of Social Sciences at the National University of Colombia in Bogotá by Rogelio Salmona.

Ricardo Legorreta chaired the jury that included Terence Riley of the Museum of Modern Art in New York and architects Dominique Perrault of France, João Luis Carrilho da Graça of Portugal, Silvia Arango of Colombia, Enrique Browne of Chile, Hugo Segawa of Brazil, Jorge Silvetti of Boston, and Ignasi de Solà-Morales of Spain. The award will be presented in a ceremony at the Barcelona Pavilion later this year. *David Cohn*



The stripped-down interior includes additions such as a circular stair.

Landmark show of Barragán's work at Vitra in Weil am Rhein

Thorough and lively, the new landmark show on Mexican architect Luis Barragán (1902–1988) marks the culmination of a major Vitra Design Museum initiative that began with the acquisition of the Barragán archive in 1994. *Luis Barragán: The Quiet Revolution* continues at the Frank Gehry–designed museum in Weil am Rhein, Germany, through October 29.

Visitors to the exhibit encounter vividly painted walls and a photographic portrait of Barragán, video presentations of his work, and three robes designed by Barragán for Roman Catholic priests.

Blueprints explain the evolution of projects including the Casa Gilardi with its interior pool. Numerous photographs depict 1920s houses in the Jalisco province of Mexico and large-scale projects in and near Mexico City. Items providing more personal insights include the architect's riding crop, his dramatic sketches of horses, early working drawings of seesaws and swings, and original copies of ARCHITECTURAL RECORD (September 1931, January 1935, and April 1937)—the very first publication of Barragán's achievements.



Videos follow the labyrinthine character of interiors, gardens, and chapel at Tlalpan. Upstairs, and somewhat lost, are large-scale models of urban plans from the 1970s and many color images of the sculptural towers at Ciudad Satelite. Designed by Bruce Mau, this exhibition is extraordinarily ambitious. Surely it deserves more space. Beginning in November, the exhibition travels to Vienna, London, Rotterdam, and Tokyo, and shows in North and South America are planned. An accompanying book is forthcoming in October. *Raymund Ryan*



Images of the sculptural towers at Ciudad Satelite are included in the exhibit *Luis Barragán: The Quiet Revolution.*

The right door can make any place more inviting.





Now, think what our custom doors could do for your home. A door with no boundaries, save those of your imagination. A door handcrafted in the Old World style from the most beautiful hard woods available: Genuine Mahogany, Cherry, Maple, Walnut and Northern Red Oak. International Wood Products can deliver this door. All the way from your mind straight to your dream home. 1-800-877-9482 ext. IWP2 www.iwpdoor.com

IWP

©1999 JELD-WEN, inc. All rights reserved. JELD-WEN, IWP and the IWP logo are registered trademarks of JELD-WEN, inc. Klamath Falls, OR.

CIRCLE 19 ON INQUIRY CARD

African burial ground on hold



An interior view of the proposed interpretive center for the burial ground.

After nearly a decade of controversy, a team led by IDI Construction Company was named this spring by the Government Services Administration (GSA) as the competition winner to design and build an interpretive center for an African burial ground in lower Manhattan. The team completed a design, but a number of snags are delaying the project.

The site was active in the 18th century as a burial ground for as many as 20,000 Africans, some of whose remains were discovered in 1991 during construction of the 34-story Foley Courthouse by HOK. When well-preserved human remains were unearthed, opposition to construction grew. The GSA agreed in 1992 to stop construction on a portion of the burial ground and appropriate funding for analysis, and eventual reinterment, of approximately 400 human remains. The site, considered one of the nation's most important colonial-era archaeological discoveries, is now a city historic district and a National Historic Landmark. The Foley Courthouse was completed in the mid-1990s.

Out of a $21 million GSA commitment to the burial ground for scientific research, public education, and memorialization, $1.6 million has been allocated to the interpretive center, which will be located inside the Foley Courthouse.

A multi-disciplinary team of New York–based designers, curators, and researchers—including architects Jacqueline Hamilton, Paula Griffith, Atim Annette Oton, and Jasper Whyte—won the competition. Many on the team are of African descent. "It was meant to be a competition that sought out fresh new faces and ideas, and that's what this team stands for," says Peggy King-Jorde, the GSA consultant who administered the competition. "There's a real spirit in this culturally diverse group."

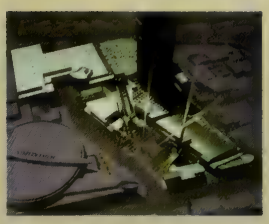
The preliminary design for the 2,000-square-foot interior space, which overlooks the burial ground, is divided into four areas that will feature multimedia exhibits to reflect the traditional African perception of the four stages of life—birth, maturity, death, and rebirth. In the final space, a simple "altar" invokes the sacredness of the burial ground, which will be visible through a large window. An exit leads into a portion of the burial ground left intact, where a memorial will be constructed.

Although IDI has completed design work, the interpretive center is now on hold until the completion of a final scientific report on the excavated burials from the Cobb Laboratory at Howard University. That research is halted due to contract and budget disagreements. *Andrew Blum*

Development may create L.A.'s Times Square West

If the owners of the Staples Center sports arena have their way, the southwestern end of downtown Los Angeles will become "Times Square West." Currently, the blocks surrounding the Staples Center and the Los Angeles Convention Center are desolate and unwelcoming. But the proposed L.A. Sports and Entertainment District, a two-stage, 3.7-million-square-foot development, could change that.

To be completed by 2004, the first stage includes a much-needed 40-story, 1,200-room hotel, a 5,000-seat theater, and a retail/restaurant complex. The second stage of the development, to be completed by 2010, includes 800 units of housing and an additional hotel east of the Staples Center.



"The linchpin of the entire development is the ability to build the hotel adjacent to the convention center," says Timothy Leiweke, president of the L.A. Arena Land Co. The plan, which requires public subsidies and city approval, has been criticized by Los Angeles City Council members because backers include Rupert Murdoch and Denver railroad magnate Phil Anschutz. Advocates for downtown Los Angeles revitalization are concerned about the inward-appearing proposed design. Carol Schatze, of the Central City Association, says, "We don't want downtown to be a series of closed mini-villages." ***David Hay***

PHOTOGRAPHY: © KINETIC MEDIA INC.(TOP); L.A. SPORTS AND ENTERTAINMENT DISTRICT (BOTTOM)



Valerio Dewalt Train Associates
Chicago, IL
WINNING DESIGN FIRM

Joseph Valerio, FAIA;
Randall Mattheis; Ken Wertz;
Nancy Willert
DESIGN TEAM

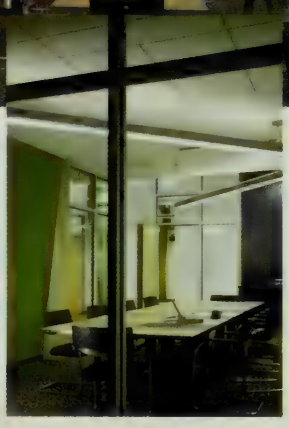
Midwest regional campus of
3Com Corporation,
Rolling Meadows, IL
PROJECT

Ultron® VIP Nylon 6,6
CARPET FIBER

FOR THE BEST DESIGNERS, THE MARK OF EXCELLENCE IS THE DOC. FOR CARPET, IT'S ULTRON® VIP.







doc

winner of the

A high-tech firm turns corporate "city" in this Doc Award-winning design. An atrium with three-story precast panels defines "main street," leading to "neighborhoods" in other areas. Over-scaled carpet patterns with Ultron® VIP play against wall colors in this creative space.

the best designs use the fiber of choice: Ultron® VIP nylon 6,6



Enter the 2000 Solutia Doc Awards!
800-543-5377, 770-951-7600 or www.ultronvip.com.
CIRCLE 20 ON INQUIRY CARD

SOLUTIA

iDESIGN ONLINE CONFERENCE



SUDDENLY YOU'RE THINKING BIGGER

This October, you can experience the design vision for the digital economy first hand — and free. Autodesk announces the iDesign Online Conference 2000, a series of over 60 live online seminars dedicated to helping you harness the power of the Internet and the potential of iDesign. Seminar topics include:

- Business-to-business collaboration and e-commerce in the building industry
- Save time locating design resources with Autodesk Point A
- Leverage your design data to increase profits
- Design build: The future of AEC

Sign-up now at:
www.autodesk.com/idesignonline

autodesk

Brought to you by

ARCHITECTURAL RECORD

IBM Business Partner

hp invent

PLACEWARE Web Conferencing

intel

COMPAQ

Featuring Microsoft Visual Basic for Applications

© 2000 All trademarks and logos are owned and/or registered by the respective companies indicated.

WWII Memorial redesigned, on track for construction



The Commission of Fine Arts–approved WWII Memorial features 56 granite pillars and two pavilions commemorating the Atlantic and Pacific theaters of war.



Friedrich St. Florian's revisions to the proposed World War II Memorial have satisfied Washington's Commission of Fine Arts, which voted unanimous 6-0 approval of the resubmitted design on July 20. The National Capital Planning Commission, which usually follows the lead of the Commission of Fine Arts, must approve the plan. That approval is expected September 7. Groundbreaking would take place November 11, Veterans' Day, with completion scheduled for Memorial Day, 2003.

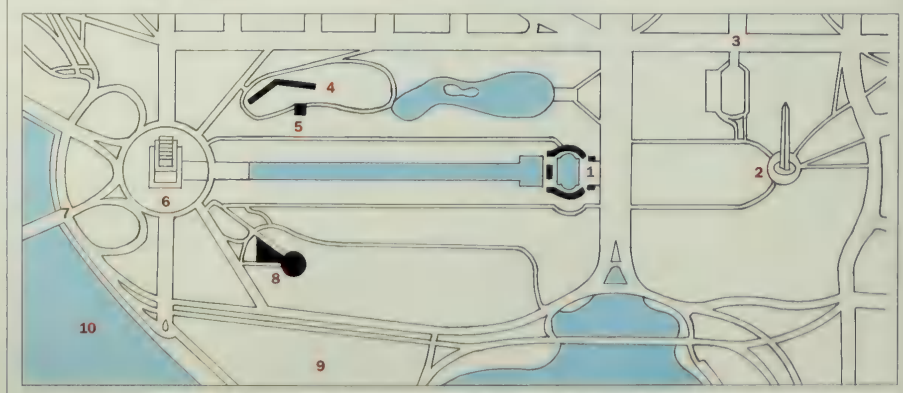
Although the memorial design was approved, the Commission of Fine Arts meeting drew an unusually large crowd; witnesses speaking against the design outnumbered supporters in five hours of testimony.

St. Florian's scheme has faced an uphill struggle since he was awarded the commission through a national design competition in 1997, two years after the memorial's location was approved. The Commission of Fine Arts rejected the initial design. Opponents criticized the location on the axis of the National Mall, and the size and imagery, which they claimed evoked imagery of the imperial architecture of Nazi Germany.

The current scheme has shed all interior programmed spaces, including exhibition halls. Sunken six feet below street level, it features a pared-down exterior sculptural plaza surrounding the Rainbow Pool. Two pavilions commemorating the Atlantic and Pacific war theaters mark the central plaza's north-south axis. Openings in the pavilions and arches make the design more transparent than previous schemes. The central plaza is ringed by 56 granite pillars (one for each state and territory at the time of war) hung with bronze wreaths. An entrance plaza leads to the memorial from 17th Street NW to the east. A central sculpture has yet to be designed.

Reductions in the memorial's scale ensure that substantial tree growth around the area will be preserved. St. Florian has also accommodated those who felt the memorial was obstructive to the Mall's visual axis between the Lincoln Memorial and Washington Monument. The American Battle Monuments Commission has already raised most of the projected $100 million construction cost.

JEC and Ellen Sands



1. *WWII Memorial*
2. *Washington Monument*
3. *Constitution Avenue*
4. *Vietnam Veteran's Memorial*
5. *Vietnam Women's Memorial*
6. *Lincoln Memorial*
7. *Arlington Memorial Bridge*
8. *Korean War Veterans Memorial*
9. *FDR Memorial Park*
10. *Potomac River*



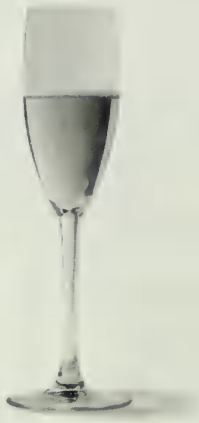
sustainable design

made from LIGNASIL

www.maderatile.com

1.800.767.4495

CIRCLE 21 ON INQUIRY CARD



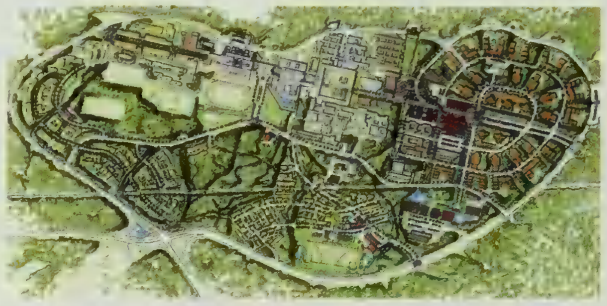




SPEAKMAN

www.speakmancompany.com
1.800.537.2107

CIRCLE 22 ON INQUIRY CARD



Sustainable community planned for Burnaby Mountain near Vancouver

A model sustainable community has been planned by Vancouver firm Hotson Bakker Architects. The planned community (above) on the Burnaby Mountain campus of Simon Fraser University (SFU) was approved by the university's board of directors in May. While the local community must approve the plan, Hotson expects to submit a subdivision application this fall with construction starting in early 2002.

The plan includes 4,500 residential units for approximately 10,000 residents in two neighborhoods on 200 acres of land. A mixed-use commercial main street will form the heart of the community. Development proceeds will fund student housing and other university needs.

A major objective of the plan is to incorporate sustainable design principles. Principal Norm Hotson says, "SFU wants this to be a model community, so it has high aspirations for this development. We're constructing a sustainability framework that sets forth ten basic planning principles. The goal is to produce a new community that would be environmentally sensitive and lead to a better strategy for dealing with issues such as stormwater and public transportation. This is tough on this site because it's isolated up on the mountain."

The Vancouver area is known for being particularly environmentally sensitive, and sustainability advocates will watch this development closely. SFU's research forest, which has traditionally been used for a variety of research activities, is within the ring road. *John Gracey*

Sarasota plan reconciles small town/cosmopolitan dilemma

In a new master plan for downtown Sarasota, Fla., Duany Plater-Zyberk (DPZ) tries to preserve the community's small-town ambiance while upgrading much of its infrastructure. DPZ will continue to refine the plan through fall 2000.



Downtown Sarasota, as envisioned by DPZ.

DPZ's plan for a 1.5-square-mile area, completed with Sarasota architects Cardinal, Carlson & Parks, acknowledges past efforts, with special attention paid to a 1924 plan by John Nolen. DPZ's analysis of the Nolen plan and its successors notes a lack of any formal means for implementation. For DPZ, the means are building and design codes, the "DNA" of a city.

Sarasota's split persona, which underlies much of the DPZ plan, combines cosmopolitan airs with main street. Gauged to encourage a modest style of development and to return the streets and bayside to pedestrians, DPZ's plan includes rerouting and/or slowing traffic along US 41 (North Tamiami Trail) by inserting four roundabouts at key choke points in the city grid.

A pedestrian emphasis also drives recommendations to extend the grid to Sarasota Bay, maintaining strategic view corridors, and adding a layer of Sarasota-inspired midrise buildings along the somewhat banal US 41 strip. The strategy is an attempt to surround and contain a recent spate of high-rise, deluxe-hotel and condominium development dotting US 41.

A key aspect of the plan is a cultural district with 150,000 to 250,000 square feet of office space anchoring an ensemble that includes new cultural facilities, parking garages, and a residential area.

DPZ devised an architectural pattern book for Sarasota that includes templates for assessing street frontage, assigning build-out parameters, and detailing building facades typical of the neo-traditional approach to planning.

The plan does not address neighborhoods north of 10th Street—some of the more troubled areas in Sarasota. *Gavin Keeney*



"No photo eyes means no callbacks. I'm making it automatic in my homes."

Jim Ayers, Builder
Hendersonville, NC



"Safe, quiet, real cutting edge. Wayne-Dalton sure has the handle on innovation."

Bill Davis, Builder
Fort Walton Beach, FL

Our new DoorMaster™ garage door opener is the talk of the industry.

(You have their word on it.)

The DoorMaster garage door opener has it all: wireless technology to reduce builders' construction time and costs; no photo eye requirements, so misalignment callbacks are eliminated; quiet operation; and customized light location.

Plus, it has no unsightly rails or ceiling-mounted power unit, no exposed springs, no door operating arm; it's highly sensitive to obstructions; and features exclusive, built-in safety features. The DoorMaster opener, when combined with a WayneGard pinch resistant door, makes the first ever UL Listed door and opener system.

It's revolutionary, and you can quote *us* on that.



Wayne® Dalton

You want a Wayne-Dalton door system.™ (Just to be safe.)

FreeVideo

To receive a free short video on the new DoorMaster opener, log on to www.wayne-dalton.com/video Or call 888-215-2225.



yne-Dalton Corp., Mt. Hope, OH 44660 © 2000, Wayne-Dalton Corp.
CIRCLE 23 ON INQUIRY CARD



Bilbao Bank (left) by Sáenz de Oiza (right)

Spanish architect Sáenz de Oiza dead at 81 Francisco Javier Sáenz de Oiza, one of the founding fathers of contemporary Spanish architecture, died of cancer on July 18 at age 81. A bold innovator and a charismatic teacher, Sáenz de Oiza inspired generations of Spanish architects with his restless avant-garde spirit of experiment and speculation.

Sáenz de Oiza's constant experimentation resulted in a radically eclectic body of work. Over the course of a 50-year career, he designed buildings that Rafael Moneo, his most famous pupil, considers among "the most important of the 20th century."

Sáenz de Oiza led the post–World War II reintroduction of Modernism to Spain with the Basilica of Aránzazu and the rationalist Entrevias public housing in Madrid, both in 1956. His 1968 Torres Blancas apartments in Madrid featured textured concrete cast in cantilevered cylindrical forms. Kenneth Frampton called Sáenz de Oiza's 1981 Bilbao Bank in Madrid one of the most elegant towers of the 20th century, with floors suspended from the central core and a sophisticated skin of glass and Cor-Ten steel. In later works, such as the 1987 Festival Palace of Santander, Sáenz de Oiza championed a rugged Postmodernism.

Sáenz de Oiza, director of the School of Architecture of Madrid in the early 1980s, designed the Spanish Embassy in Brussels.

Sáenz de Oiza leaves his studio to the four architects among his seven children. His ashes will be buried near his summer house in Majorca. *David Cohn*



National Underground Railroad Freedom Center by Blackburn

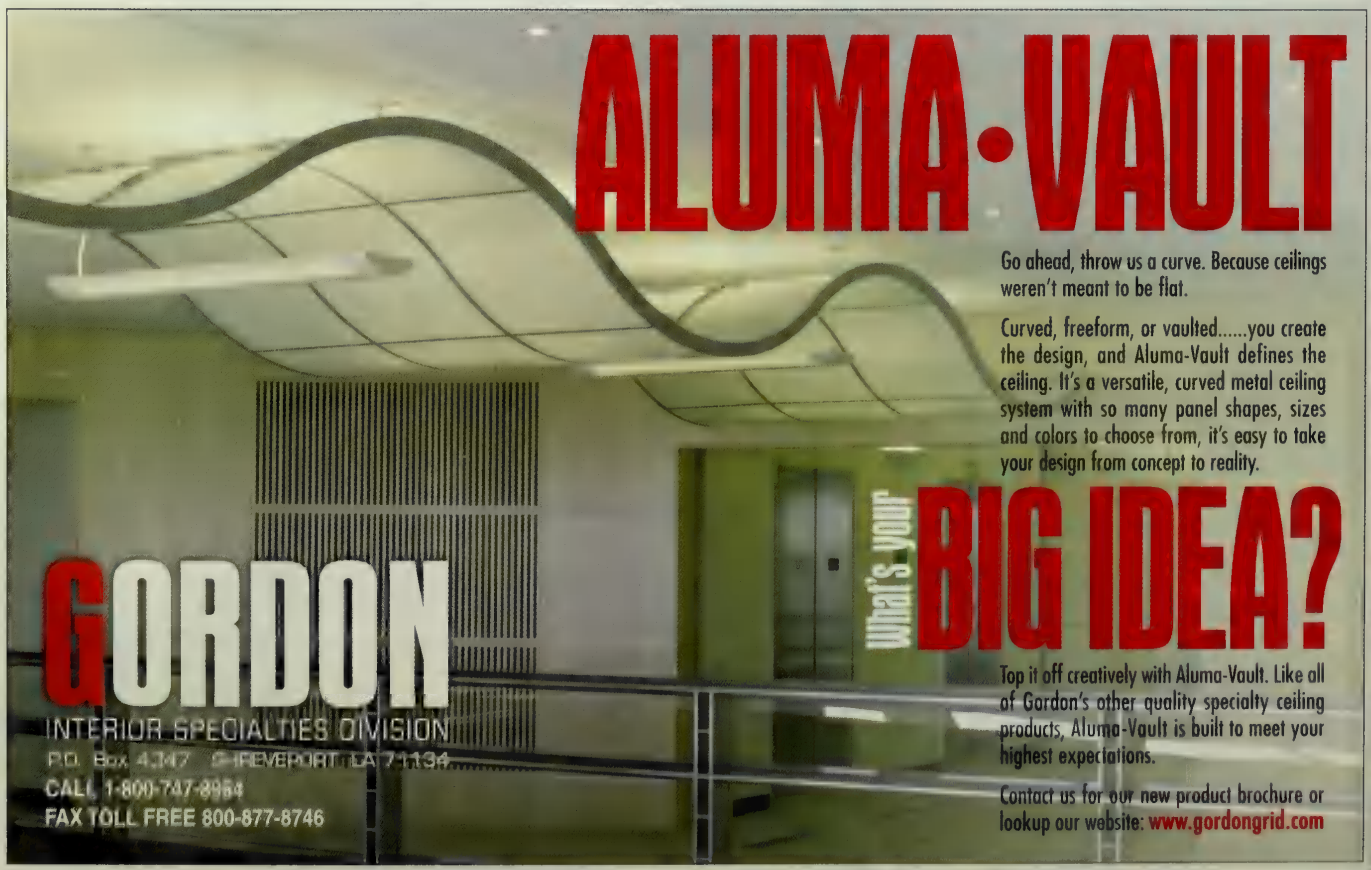
AIA diversity leader Walter Blackburn, FAIA, dies Indianapolis architect Walter Blackburn, FAIA, a national leader on diversity issues, died of cancer on August 9 at age 62. A native of Indianapolis, Blackburn graduated from Howard University in 1963. He was president of Blackburn Architects and a prominent civic leader in Indianapolis.



Blackburn

Blackburn was instrumental in raising awareness of diversity issues at the national level of the American Institute of Architects (AIA) in the 1990s. He spearheaded the formation of the AIA Diversity Committee, leading to subsequent AIA Diversity Conferences. He was elected AIA national vice president in 1994. Thanks to Blackburn's efforts to promote diversity, the AIA became more welcoming to all. "People who had never felt at home in the organization now found they had a place to gather," says Marga Rose Hancock, Hon. AIA, executive vice president of AIA Seattle.

Blackburn designed the National Underground Railroad Freedom Center, currently under construction in Cincinnati.



CIRCLE 24 ON INQUIRY CARD

Structural™

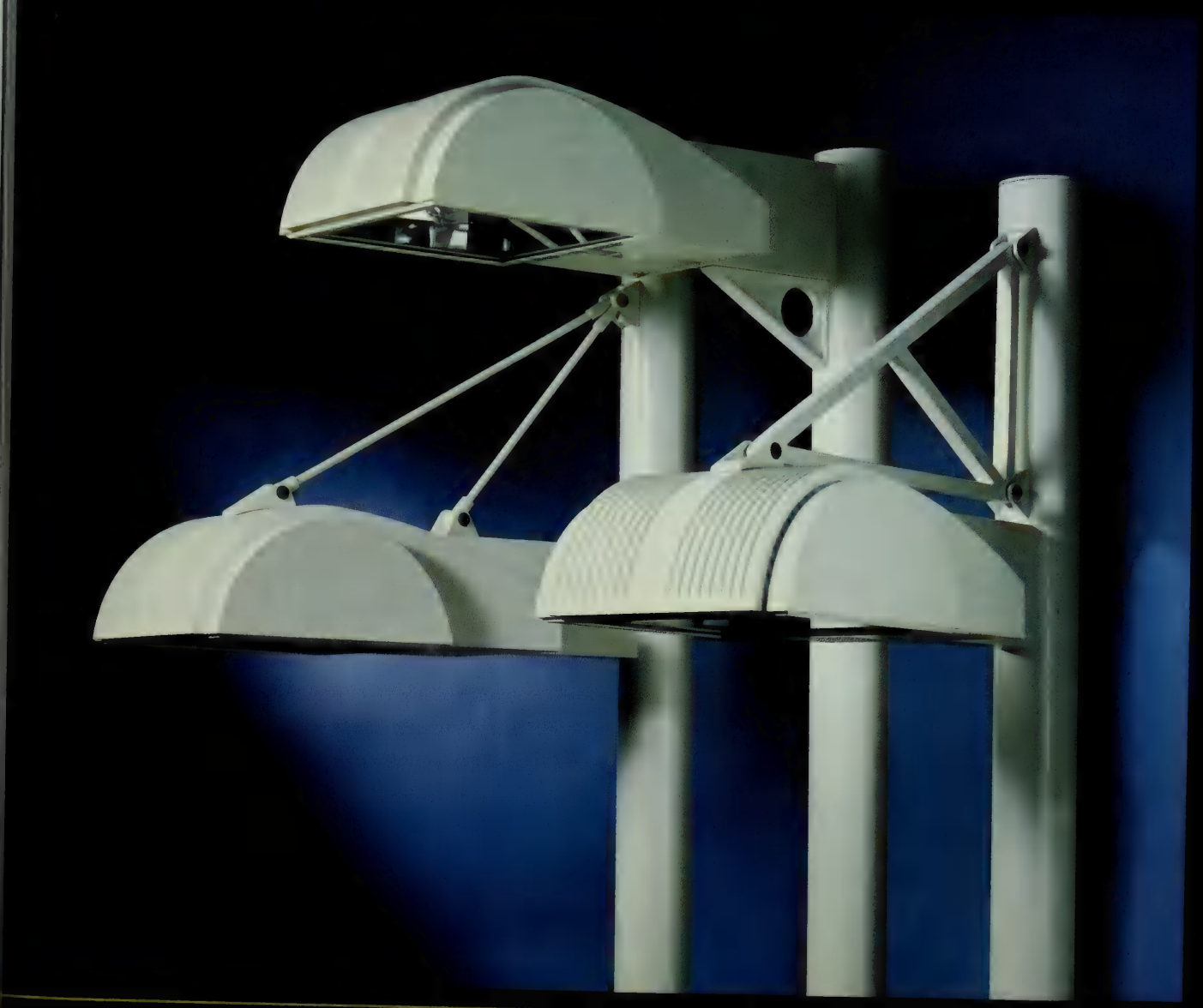


KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

CIRCLE 106 ON INQUIRY CARD

www.kimlighting.com



News Briefs

Hadrian Predock and John Frane win museum job
Predock_Frane Architects, based in Venice, Calif., has won a competition to design a $17 million Central California History Museum in Fresno. Predock_Frane Architects is a partnership of Hadrian Predock, AIA, son of Antoine Predock, FAIA, and John Frane.

The winning scheme features multiple layering, with a grid of columns, layers of glass, trellis sunshades, and clusters of cherry trees.

"It's the most important project in our lives," Predock told the *Fresno Bee*. "We're going to be so committed to it. It's our number one priority."



Central California History Museum



***Building Big* host David Macauley**

Building Big Ever wonder exactly how the great structures of the world were built? If so, you may want to watch the five-part PBS series *Building Big*, airing five consecutive Tuesday evenings beginning October 3. Series host and narrator is David Macauley, author-illustrator of *The Way Things Work*. Each episode will focus on a different structure type: bridges, domes, skyscrapers, dams, and tunnels. Program highlights include the Brooklyn Bridge, the Pantheon, the Chrysler Building, Hagia Sophia, and Boston's Big Dig. The series will answer burning questions such as: How does a dam resist the crush of million of gallons of water?



Telfair Museum by Safdie

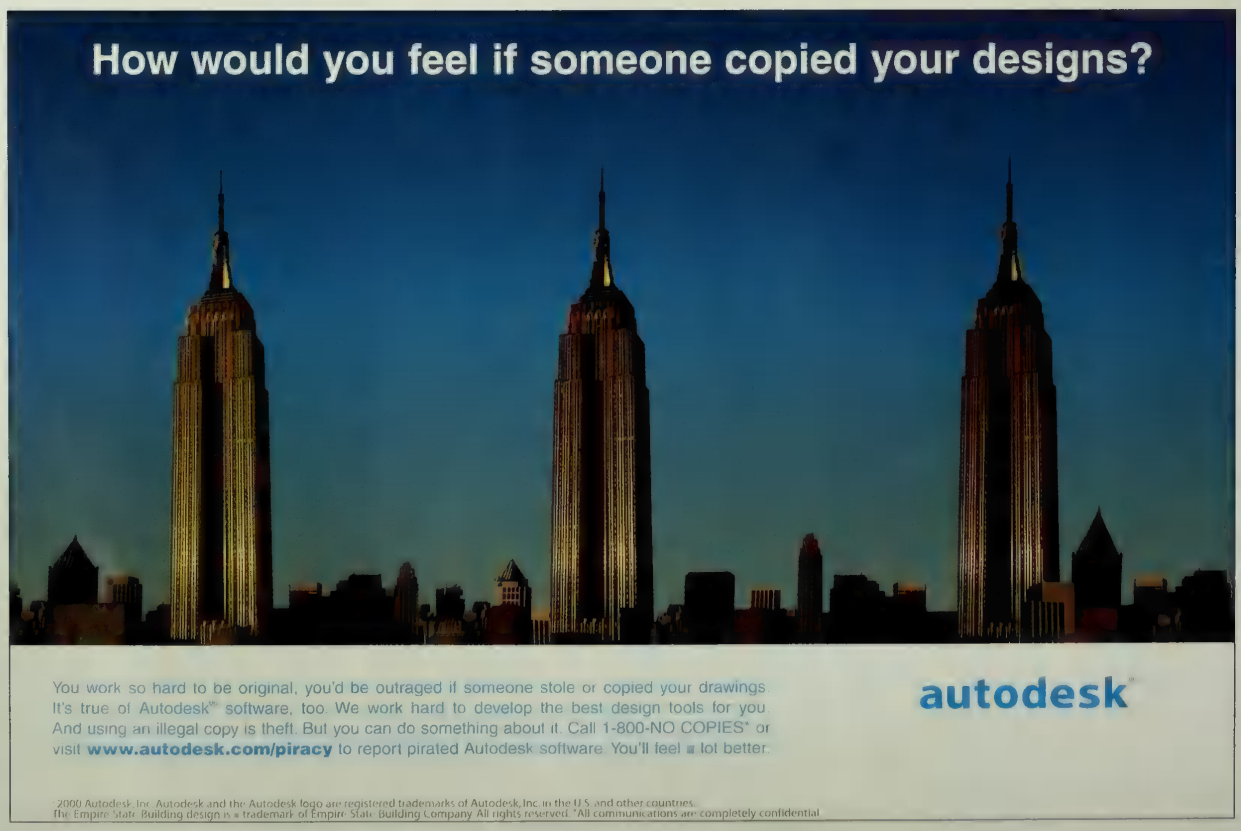
Safdie's Telfair proceeds An addition to the Telfair Museum of Art in Savannah, Ga., designed by Moshe Safdie, FAIA, received approval from the city's historic review board on July 12. The 40,000-square-foot, three-story building was originally budgeted for $15.5 million, but the cost is expected to grow after two years of delays.

Safdie's design had been met with public debate and opposition from Savannah preservation groups. Safdie modified his design accordingly. The building will have an African-American art gallery, an outdoor sculpture garden, an auditorium, gift shop, and offices. Construction is expected to begin later this year.

Down to two for Blanton After presentations by six firms for the Jack S. Blanton Museum of Art project at the University of Texas at Austin, the museum's architectural advisory committee narrowed the field to two on August 21: Kallmann McKinnell & Wood Architects of Boston and Michael Graves & Associates of Princeton, N.J. The Regents' Facilities Planning and Construction Committee will make a final decision in early October.

D.C.-area airports expand
Both Washington Dulles International Airport and Baltimore-Washington International (BWI) Airport are planning ambitious expansion programs.

Only one year after a $1 billion expansion was completed, a $3.4 billion six-year expansion has been approved for Washington Dulles International Airport. BWI, the second-fastest growing airport in the country, announced a ten-year, $1.3 billion expansion plan August 9.



Changing The Way You Think About Walls™

textra™
Glass Textile Wallcoverings

Johns Manville's glass textile wallcovering adapts to various surroundings as easily as a chameleon. Durable *Textra*™ is offered in a choice of woven-in patterns. Yet it's also designed to be painted and can be repainted up to 8 times. This unusual combination of texture, color, and performance opens up infinite possibilities.

Now available in North America, glass textile wallcovering has been used for decades in Europe - where it even hangs in the Louvre museum. Easy to install, *Textra* camouflages minor wall surface irregularities. It holds up in high-traffic areas, hides dirt, and can be quickly patched if ever necessary. Non-toxic and flame-retardant and strong, it actually increases the dimensional stability of the wall. And unlike vinyls, *Textra* is porous and is an ideal component of a breatheable wall system.

Visit the JM web site at www.jm.com/textra or call 1-800-654-3103 for more information on *Textra*. You'll start changing the way you think about walls.

JM Johns Manville

Textured Twill #T8090

CIRCLE 25 ON INQUIRY CARD

Sand Pebbles #T9070

WWW.architecturalrecord.com

DEBUTING Sept. 11, new weekly web offerings.

news

projects

features
digital architect
green architect
business week/ architectural record awards
interviews

dialogue
editorial
from the field
letters

virtual architect
record houses

continuing education

recruitment

advertisers/ products

professional directories

about record
index
subscribe
advertise
shop record
submit an article
editorial calendar
email policy
privacy policy
contact us

events

site map

home

Mark your calendars....

Mondays: *Architectural Record* ARCHives

Sept. 11 - 'By Way of Introduction' - Introductory essay by Harry W. Desmond, *Record's* founding editor from the first issue of Architectural *Record* (July 1891)

Sept. 18 - Flash back to the opening of Mies van der Rohe and Phillip Johnson's Seagram Building, July 1958.

Sept. 25 - Read the 1905 *Record* article assessing architect Frank Lloyd Wright's work up to that time.

Wednesdays: New 'Green' features in Green Architect

Sept. 13 - DEP Headquarters in PA built on a brownfield with environmentally sensitive materials.

Fridays: Architectural Book & Media Reviews

Sept. 15: Check out the latest books, CD-ROMs, movies, and television programs about architects and architecture.



Daily News

Get the latest scoops from the world of architecture.

Projects



Record Interiors

Find links to people and products involved in *Record Interiors* and other *Record* projects. **Web Only** - Exclusive construction photos and sketches from **Georges Restaurant.** And a portfolio of photos from **Zumtobel Staff's Zurich** lighting showroom.

sponsored by buzzsaw.com an Autodesk venture

Tune in to "From the Field"

Click for the latest buzz by *Record* editors from travels in the field – only on architecturalrecord.com. New journals are posted regularly.

Interviews

Exclusive interviews with leading architects including James Polshek and partners, Calatrava, Gehry, Legorreta, and others.

sponsored by revit

Digital Architect

Connect to related high tech resources through **web-only IT Vendor Guides** and software reviews with links to manufacturer web sites. Find current and past coverage.

sponsored by autodesk

Green Architect

Find web-only 'Green' product reviews, **links to manufacturers** and weekly features on green projects and issues. **New this month:** Pennsylvania's DEP Headquarters.

Earn CES Credits Online

Read *Record's* **building science** features/ continuing education self-study courses and **file online for CES credits.**

The National Terrazzo & Mosaic Association

presents the

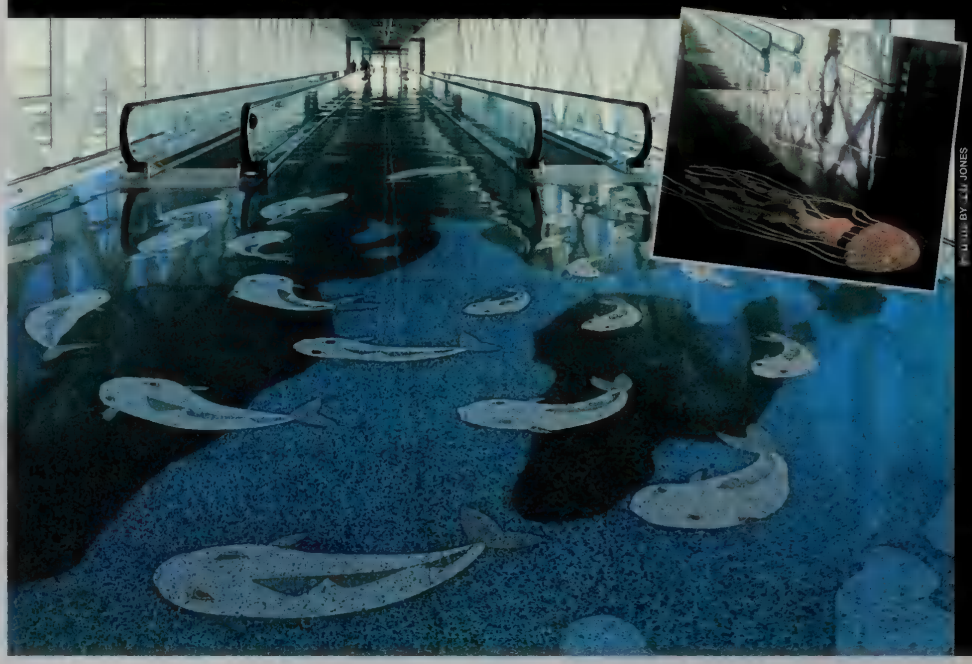


The National Terrazzo & Mosaic Association, Inc.

110 East Market Street, Suite 200-A • Leesburg, Virginia 20176
In Virginia (703) 779-1022 • Toll Free (800) 323-9736
Fax (703) 779-1026 • www.ntma.com • officeNTMA@aol.com

National Terrazzo & Mosaic Association 1999 Honor Award

Atlantic Journey – Logan Airport Boston, Massachusetts



Architect
Cambridge Seven Associates
Cambridge, MA

Designer/ Artist
Jane Goldman
Somerville, MA

Come and take an "Atlantic Journey" at Logan Airport in Boston, Massachusetts. Artist Jane Goldman created this undersea adventure in response to a contest held by the Owner. MassPort invited artists to submit floor designs for a pair of pedestrian walkways. Contest participants were given the option to design in either Terrazzo or Ceramic Tile. Ms. Goldman chose Terrazzo because her vision of realistic-looking sea creatures did not lend itself to tile. Travelers have the impression of gliding along in a glass-bottomed boat as they are transported along moving sidewalks past 60 different species of Atlantic marine life. The scene is a welcome diversion for weary travelers young and old alike.

National Terrazzo & Mosaic Association 1999 Honor Award

Broadway State Office Building Los Angeles, California

Architect
Johnson Fain Partners / Nadel Architects
Los Angeles, CA

Designer/ Artist
Johnson Fain Partners / Nadel Architects
Los Angeles, CA

This Epoxy Terrazzo project was the renovation of an old State of California office building. The new terrazzo was installed over the old marble floor, with the colors and shapes designed to mimic the old marble floor. The terrazzo was installed without shutting down the building, so most of the work took place at night.



National Terrazzo & Mosaic Association 1999 Honor Award

Corradini Corporation Headquarters Los Angeles, California



Architect
Calvin Smith & Associates
Laguna Beach, CA

Designer/ Artist
Calvin Smith & Associates
Laguna Beach, CA

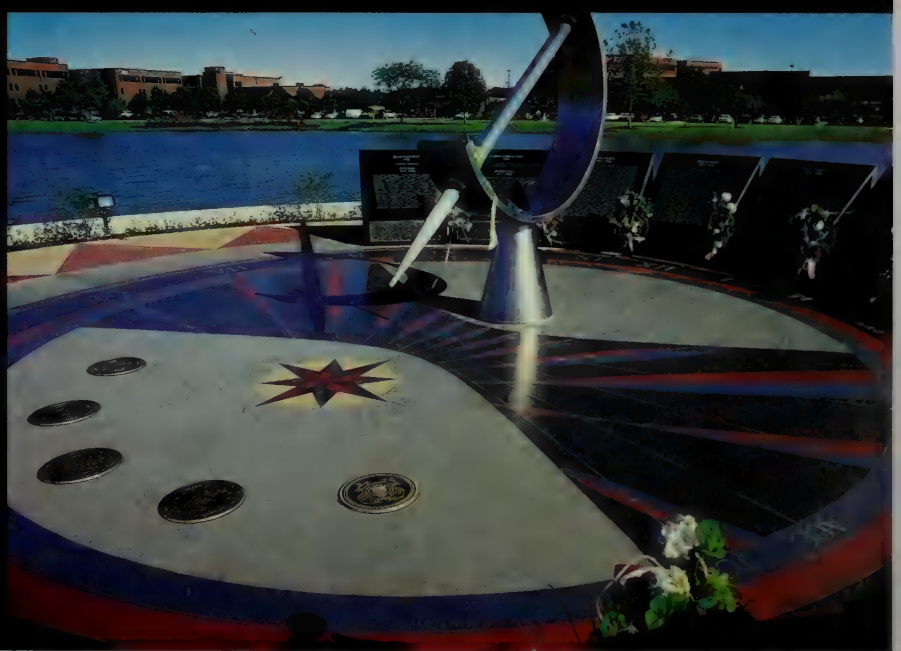
The entry of this building has a large black and red checkerboard floor, similar to many found in Italy. A serpentine design borders all corridors, which are accented by black diamonds every 10 feet. The central area of the building has a floral design, with large brass inlays, that was copied from a floor in Pompeii. The subtle colors are cement terrazzo, while the more vibrant colors were made with epoxy terrazzo. This project is truly a showpiece for a terrazzo contractor's headquarters.

National Terrazzo & Mosaic Association 1999 Honor Award

DuPage County Veteran's Memorial Wheaton, Illinois

Architect
Wight & Company
Downers Grove, IL

This project is a bonded rustic terrazzo design in 5 colors, installed as the base of a Veterans Memorial. Brass and white metal were used in the inlay design work. The inner circle of the design was ground and polished, with the outer circle remaining rustic terrazzo. The logo (central work had to be laid exactly, so the Gnomon (sun dial) would accurately indicate not only the time, but hours until sunset, the day and the month.



National Terrazzo & Mosaic Association 1999 Honor Award

JOB OF THE YEAR

Carmel Clay Public Library Carmel, Indiana



Architect
Meyer, Scherer, & Rockcastle, Ltd.
Minneapolis, MN

Designer / Artist
Browning Day Mullins Dierdorf, Inc.
Indianapolis, IN

Carmel Library's epoxy terrazzo flooring, according to many, is "A beautiful functional work of art." This job has very ornate terrazzo vine & leaf design "growing" throughout the main lobby. The terrazzo floor is complimented by a large precast terrazzo tread and riser monumental stairway. At all locations where terrazzo flooring was installed, a cast in place 6" high cove terrazzo base was installed for ease of maintenance.



National Terrazzo & Mosaic Association
1999 Honor Award

Hill Hall – Colorado School of Mines
Golden, Colorado

Architect
RNL Design
Denver, CO

Designer / Artist
Carolyn Braaksma / David Griggs
Denver, CO

"Alchemy Works" is a Colorado Percent for Art Project integrated into the construction of Hill Hall, Metallurgy Department at the Colorado School of Mines in Golden, Colorado. The design was enhanced by art treatment of the main floor, interior columns with terrazzo cove base, precast concrete accents at the building entries and facade, atrium window, and entrance plaza. Eleven different colors of matrix were used, separated by varied brass and zinc stripping, to "create designs based on the science of metallurgy." The floor patterns are derived from micrographic views of metal crystalline structures and diagrams of metallurgical processes. One quarter inch thick brass alchemy symbols are scattered across the floor to denote modern metallurgy as the foundation in ancient alchemy. School of Ames students created brass and zinc stripping metallurgy symbols that were placed in select areas of the floor.

National Terrazzo & Mosaic Association
1999 Honor Award

Northside Hospital Women's Center Addition
Atlanta, Georgia

Architect / Designer
Howell Rusk Dodson Architects
Atlanta, GA

The women's hospital addition has an epoxy terrazzo floor installed in the entrance atrium and waiting area. The pattern is a free form design utilizing four colors. The Architect/Designer's comments follow: "I wanted to use terrazzo for several reasons. The free form design pattern in the floor was quite intricate, and this allowed me to fulfill the expressive free flowing lotus blossom symbol of the building. I was also able to develop my own colors through mixing a number of test samples to match the color scheme of the rest of the finishes. Lastly it provided the 'permanence' to permanently place the symbols I designed for the facility into the structure for the life of the building. In addition, the quality of the craftsmanship displayed on the job was that of days gone by. It is a rarity these days to find workmen that put that effort into their trade and are proud of it."



PHOTO BY WALT HEDGES

National Terrazzo & Mosaic Association 1999 Honor Award

Savoie Residence Bloomfield Hills, Michigan



Designer / Artist
Sally Savoie
Bloomfield Hills, MI

This rustic terrazzo patio installation was installed on a compacted stone fill in a 5" overall system. The surface was retarded, then pressure washed the following day to reveal the rustic surface. In lieu of expansion joints, 1/4" saw cuts were made at strategic locations a short time after the installation. The surface was then washed and two coats of sealer applied. The owner/designer wanted rustic terrazzo which gave the ability to form curves, create continuous rustic terrazzo treads and risers, and the desired non-slip surface. Also the warm earth tones of the dogwood pink granite complimented the existing colors of the surroundings.

National Terrazzo & Mosaic Association 1999 Honor Award

Swaminarayan Temple – I.S.S.O. of Chicago Wheeling, Illinois



Architect
[illegible], Engineering
Chicago, IL

It was obvious that terrazzo was the product best suited for use in this beautiful prayer room. The fact that custom colors could be produced was a significant factor in the selection of epoxy terrazzo. Prefabricated brass strip designs were utilized to create the six attractive feature logos in the floor.

National Terrazzo & Mosaic Association 1999 Honor Award

Union Station Worcester, Massachusetts



PHOTO BY D.C. VANDAL

Architect

Finegold, Alexander, & Associates, Boston, MA

Union Station sat like a white elephant in the city of Worcester, Massachusetts. Built in 1911 and abandoned since 1974, the 90,000 sq. ft. train station was home to a flock of pigeons and a pile of rubble when, in 1997, the Worcester Redevelopment Authority decided to restore the building to its former glory. With an emphasis on historical preservation and restoration, and using several old photos as their guide, architects recreated Union Station in its heyday.

Because the existing Terrazzo floor was badly damaged, architects chose to install a new 3/8" Epoxy Terrazzo to match the original 3-color design, rather than attempt repair. Terrazzo was installed throughout the building, including the Grand Hall, Rotunda, and Main Waiting Area. The tone-colored field complements the restored Terra Cotta walls, and the embedded radial pattern leading to the Precast Terrazzo stairs echoes the radius of the Rotunda. The new and improved Union Station will be home to Commuter Rail, Amtrak, city buses, shuttles, and taxis and is expected to reinvigorate the surrounding retail area.

National Terrazzo & Mosaic Association 1999 Honor Award

Villa Christina Restaurant Atlanta, Georgia

Architect

Schneider Wright, Inc.
Atlanta, GA

A five color curvilinear epoxy terrazzo design was used for the lobby and aisles. Glass chips and sparkle matrix produce deep rich features for this upscale restaurant. This is what the project Architect had to say: "The management of Villa Christina wanted to replace the original hand-painted concrete floor with a low-maintenance flooring that would reveal the unique character of the original floor and complement the colorfully artistic design of the restaurant. Central to the decision to use terrazzo were the ease of cleaning and longevity terrazzo floors have always been known for. Ultimately terrazzo was selected for the unlimited palette of color and texture combinations, and the ability to naturally blend free form curvilinear shapes into the design—a uniqueness difficult to achieve with most other single flooring materials."



PHOTO BY WALT HEDGES

National Terrazzo & Mosaic Association 1999 Honor Award

Plaza Las Americas San Juan, Puerto Rico





Special Art Award

Architect
RTKL Associates, Inc.
Washington, DC

Designers / Artists
Myrna Baez
Marta Perez Garcia
Nick Quijano

The Owner commissioned three published Puerto Rican artists to paint culturally significant pieces that were to be used in the renovation of this upscale mall. Terrazzo was selected for its versatility of shapes and colors. The Owner recognized that if these works of art were to be "brought to life," it could only be done with terrazzo materials and by terrazzo artists.





National Terrazzo & Mosaic Association 1999 Honor Award

Virginia Beach Higher Education Center Virginia Beach, Virginia

Architect
Moseley Harris & McClintock
Virginia Beach, VA

Epoxy terrazzo was selected for this Old Dominion University satellite facility because of its design flexibility, attractiveness, durability, and ease of maintenance. The beautifully proportioned terrazzo layout encompasses four colors, chosen to complement the exterior masonry and stone work as well as the interior woodwork. One of the colors was designed specifically to match the Old Dominion University "blue" school color. In addition to the flooring, this outstanding use of terrazzo also includes precast stair treads, risers, stringers and wall cap. The overall terrazzo design provides a sense of charm and distinction to the atrium and adjoining areas.



ordinary





TRIMCO has a unique line of quality hardware products from the ordinary to the extraordinary. Our *MasterCraft, Modern Masterpieces* and architect-designed *Focal* lines give you a wide range of exquisite, handcrafted door pulls and tasteful contemporary door trim.

We also offer a complete line of Life Safety Products including Push/Pull Latches, Auto Flush Bolts, Door Coordinators and others as well as Anti-Vandal and Heavy Duty Products for schools and public buildings.

Our in-plant capabilities and award winning design and engineering departments enable TRIMCO/BBW to take your idea, implement your concept, and then manufacture it to your specifications.





CALL US AT 323/262-4191 OR FAX TOLL FREE 800/637-8746 EMAIL: TRIMCOBBW@AOL.COM

Trimco

TRIMCO offers the broadest range of sturdy and tasteful accessory door products. For additional information see our website at **www.trimcobbw.com** *or in the SweetSource CD and at the SWEETS web site:* **www.sweets.com**

CIRCLE 26 ON INQUIRY CARD

XTRAORDINARY

Come to the Source ...





... to Axor Starck, the newly expanded designer line from Hansgrohe - complete from lav mixer to high quality accessories. Now available, the revolutionary two handle, single hole mount mixer, based on Starck's renowned simplistic design. Like to see more... call 1-800-719-1000.

Hansgrohe, Inc. • 1490 Bluegrass Lakes Parkway ▪ Alpharetta, GA 30004 ▪ Tel 770 - 360 - 9880 ▪ Fax 770 - 360 - 9887

www.hansgrohe-usa.com CIRCLE 27 ON INQUIRY CARD

High design without High-Tech: A new generation of Brits delivers antidotes to the High-Tech stars

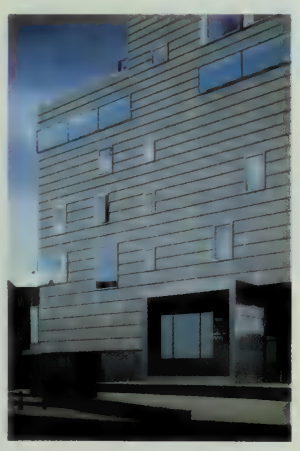
Correspondent's File

By Laura Iloniemi

This is the time for talented young British architects to shine—even if they are not High-Tech stars. Savvy young architects, who were forced to find creative means to stay in practice during the recession of the early 1990s, are benefiting from a steady flow of funds for cultural projects and from the residual hype surrounding the High-Tech star architects.

The architectural scene in Britain has enjoyed a boom since the establishment of the country's national lottery in 1994. Since then, a plethora of funds has become available for cultural projects. The Arts Council, a British arts policy body, vetted proposals and selected the worthiest for financial backing. Some companies began specializing in putting together convincing lottery funding applications, and cities, towns, and counties of all sizes have planned or built new museums, exhibition centers, theaters, concert halls, visitor gateways, and sports facilities. To attract the general public, clients often emphasized the importance of easily recognizable architecture. As a result, architects in the 1990s too often sought the postcard effect of the Sydney Opera House.

The High-Tech architects, including Norman Foster and Richard Rogers, have won many competitions for high-profile lottery-funded landmark projects. Foster's wins include Wembley Stadium, the Great Court at the British Museum [AUGUST 2000, page 30], and the Millennium Bridge [AUGUST 2000, page 28]. And Rogers' practice designed the most prominent lottery-funded project of all, the Millennium Dome [DECEMBER 1999, page 78]. Some would consider the bounty given to High-Tech stars with already-booming practices like Foster and Rogers unfair, but the hype generated by their projects has, in some ways, been beneficial to all.





The silver-gray terra-cotta-clad Walsall Art Gallery by Caruso St. John (left) and the Peckham Library by Alsop and Störmer (right) have attracted much attention.

Antidote to High-Tech

British clients have become more design conscious and are selecting talented young architects for projects that, while relatively small, have enabled practices to show off their design skills. The Walsall Art Gallery by Caruso St. John is an exemplary lottery-funded project of this kind. Located near Birmingham, the gallery represents an unusually mature approach for a practice's first major commission. The silver-gray terra-cotta-shingled structure, with the gravitas of a civic building, towers over Walsall near the former city boundary. Its solidity, massing, and materiality, as well as the way the gallery gradually reveals itself, are a contrast to the immediacy and transparency common to High-Tech. When the Walsall Art Gallery opened, it was heralded in the local press as representative of a new architectural camp and a welcome antidote to High-Tech.

The government's initiatives for encouraging good design through the Arts Council has created a cultural climate for constructing not only visitors' attractions, but inner-city improvements as well. The London borough of Southwark has been a leader in its numerous collaborations with architects to revitalize this area south of the Thames. The decision to have the Tate Modern in Southwark's old power station has been a catalyst for many other developments nearby. Far beyond the Tate's limelight, however, worthwhile projects are also taking place. For example, away from the river, Southwark has a poor inner-city urban community called Peckham. The new Peckham Library by Alsop and Störmer is a wonderful example of regeneration in this type of context. The library, clad in green copper, colored glazing panels, and undulating stainless steel, provides a generous new

Laura Iloniemi is an architectural writer based in London. She studied the history and philosophy of architecture at Cambridge.

public space, sheltered under the horizontal reading room that cantilevers from a five-story block. Inside, the reading room is composed of a double-height space dominated by three timber-clad pods on stilts that house meeting rooms and additional reading areas. Floor-to-ceiling colored glass panels bathe the children's library room in multicolored light, making the building inherently friendly. Not surprisingly, the library is a magnet for local residents.

Market stalls serve Hackney

In the London borough of Hackney, in the northeast corner of the city, similar steps have been taken toward urban regeneration. Hackney has Britain's largest population of artists, and comparisons to New York's SoHo have been frequent, due to similar loft spaces available in Hackney's vacated warehouses and industrial buildings. The modest-size Hackney Market Stalls by Hawkins Brown Architects is ingenious in its ability to enhance the urban fabric in an ethnically and economically diverse neighborhood. The project, a row of 10 stalls used for selling goods such as handicrafts, is housed in prefabricated steel pods with adjacent studio space. The project was conceived from within its context—Hawkins Brown is based in Hackney and the firm works closely with the local council.

The growing number of architects seeking to collaborate with local authorities, usually with limited budgets, is a direct result of the hard-hitting recession of the early 1990s. A lack of work and resources at that time forced architects to be very imaginative in how they could contribute to the built environment. They learned to make something out of nothing. Therefore, what is perhaps most exciting about the variety of British work is not only design, but also approach to practice and procurement methods. During the recession, the younger generation of architects learned the necessary entrepreneurial skills for acquiring funding for projects and for promoting themselves to local authorities, developers, and other private clients. This enabled the younger generation to introduce good design into places around Britain where it otherwise did not exist or was not prevalent: the public spaces of small urban communities, car parks, bus sheds, modest-size offices and other commercial spaces like shops, bars, and hair salons.

Retaining existing elements

In London, a project that has generated a great deal of interest among architects and the public is Howarth Tompkins' refurbishment of the Royal Court Theatre in Sloane Square, Chelsea. The project is fascinating in the way Howarth Tompkins has carefully retained and exposed selected elements of the existing, badly deteriorated Victorian building, which is protected as a historic structure. The two theater spaces, entrance hall, corridors, lift shaft, underground restaurant, and administrative spaces each have their own visual language expressed in a rich palette of materials distinguishing them as parts of a whole. Even the back-of-house extension is clad in three carefully selected materials: red-

WHAT IS PERHAPS MOST EXCITING ABOUT THE VARIETY OF BRITISH WORK IS NOT ONLY DESIGN, BUT ALSO APPROACH TO PRACTICE AND PROCUREMENT METHODS.







A creative use of materials highlights the exterior and interior renovation of the Royal Court Theatre in Sloane Square, Chelsea (above). Select elements of the original building were retained and exposed, and new materials include red-painted steel, cedar wood, and Cor-Ten mesh. The Hackney Market Stalls by Hawkins Brown Architects, housed in prefabricated steel pods, engage the neighborhood (left).

THE FUTURE OF CONTINUING EDUCATION!

Introducing RedVector.com

Now you can get professional continuing education online, without ever having to leave your home or office...

- **NO Travel**
- **NO Hotels**
- **NO Boring Seminars**

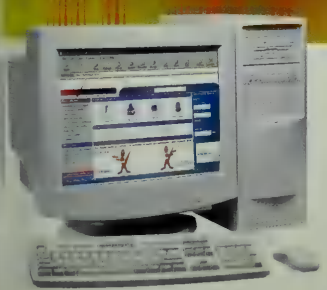
With **RedVector.com**, you can fulfill all of your continuing education requirements ONLINE, in real time. The **RedVector.com** website provides you with the information you need - when you need it, 24 hours a day.

Our online Group Hosts are trained in the rules and regulations of every state, and are available "live" 18 hours a day, seven days a week for personal interaction. Our entertaining format is designed to keep you up to date, satisfaction guaranteed.

- **FREE Personal Online Assistance 18 hours a day, 7 days a week, 7AM-1AM EST**
- **FREE Online Course when you register as a new user**
- **FREE Updates on news and events in your profession**
- **FREE Submission of completed credit hours to State Licensing Boards**
- **FREE Messaging Forum interaction with other industry professionals**

Visit **RedVector.com** today and discover the industry's largest selection of continuing education offerings!

Mention this ad and receive a FREE ONLINE COURSE when you register as a new user at www.RedVector.com



REDVECTOR.COM

Continuing Education For Licensed Professionals

CIRCLE 28 ON INQUIRY CARD

Email: info@RedVector.com or Call 813/207-0012



painted steel, cedar wood, and Cor-Ten mesh.

Post-recession, British cities are still benefiting from a frugal outside-the-box approach. For example, Birds Portchmouth Russum Architects has designed an imaginative footbridge in London's eastern borough of Newham. The bridge connects two girls' school buildings across a busy main road. The solution had to be economical, so the architects opted for a structure of steel hoops with fabric stretched over them—similar to a covered wagon. The Newham footbridge is a good example of how careful insertions within a streetscape can be an effective means to uplift an area.

The best of the young architects are focusing increasingly on how pieces contribute to the overall built environment rather than on individual buildings alone. The result is a more cohesive urban landscape with modern, but not necessarily High-Tech, interventions in London and throughout Britain. As the younger firms gain recognition and obtain more prominent commissions, new British architecture will soon not be so singularly equated with High-Tech. ■

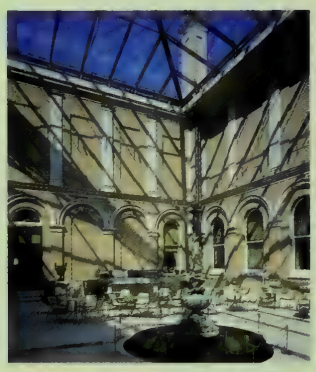


Fabric covers this footbridge by Birds Portchmouth Russum Architects.

Additions and renovations to London museums debut

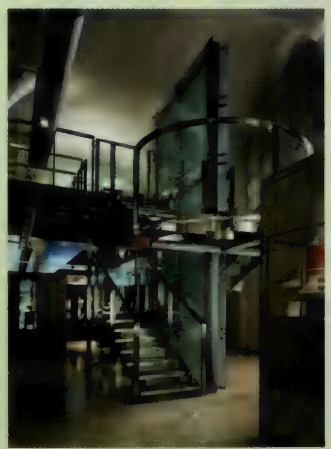
When it comes to art museums in London, you'd be forgiven for thinking that the new Tate Modern by Herzog and de Meuron is the only show in town. This year, however, has seen the completion of several other important cultural projects in the capital.

The cognoscenti prefer to ignore the new Tate and its crowds, and head instead for the transformed National Portrait Gallery (NPG), tucked away behind the better-known National Gallery on Trafalgar Square. This cluttered and somewhat eccentric collection of portraits of Britain's great and good, from Tudor times onward, has now been given a new heart by architects Sir Jeremy Dixon and Edward Jones. After the 17-year saga of their remaking of the Royal Opera House in Covent Garden, which opened in late 1999, Dixon and Jones received the commission from NPG for an exemplary, lower-key project. They have not disappointed. A three-story-tall lobby, in what used to be a concealed light well, has a long escalator that ascends to a new Tudor Gallery. Another new gallery devoted to late-20th-century portraits is suspended by steel hangers in the space beneath and opens to the atrium by means of angled sections of side wall that provide hanging space and solar control.









Clockwise from top left: the interior courtyard at the Wallace Collection, addition to the Dulwich Picture Gallery, interior of the Gilbert Collection by Inskip and Jenkins at Somerset House, and the National Portrait Gallery.

Dixon and Jones also had a hand in the revamped Somerset House, the Georgian palace of civil servants built by Sir William Chambers on the north bank of the Thames by Waterloo Bridge. This has long been a hidden gem, despite the existence of the Courtauld Gallery and Institute in its northern ranges. Its great courtyard, in recent years used as a parking lot, has been restored by conservation specialists Donald Insall Associates. Dixon and Jones designed a cascade of computer-controlled fountains in the courtyard and a lightweight summer cafe on the restored Embankment Terrace. The cafe is an open-air, demountable structure on a timber plinth, with an umbrella-style, tensile fabric roof canopy on steel columns. The southern ranges of this sprawling complex now contain the sporadically kitsch Gilbert Collection of precious artifacts, previously in California, in a fine contemporary installation by architects Peter Inskip and Peter Jenkins.

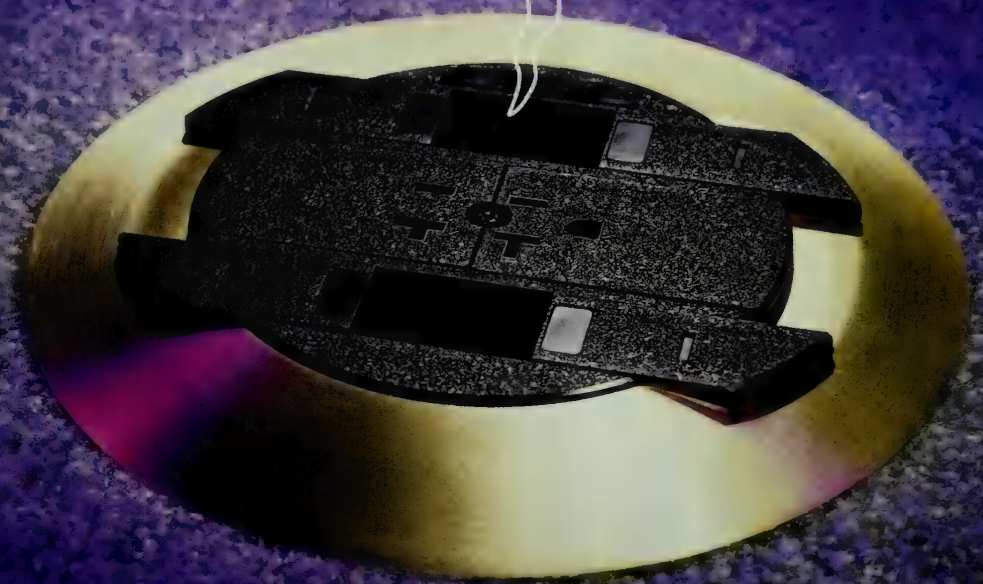
Elsewhere, Oregon-born, London-based architect Rick Mather has been busy on two of the capital's best-loved and most historically sensitive small collections. Sir John Soane's exquisite Dulwich Picture Gallery in the southern suburbs, the first purpose-built public art museum in the world, has been subtly restored and given new facilities, including cafe and lecture hall, in an understated Modern glass-and-steel front courtyard extension by Mather that leaves the original building visually untouched. In the center of town, Mather's task was similarly to extend the Wallace Collection on Manchester Square by glazing over the courtyard of this landlocked, formerly aristocratic town house and excavating four new galleries and a small lecture hall beneath it. You'll enjoy the Wallace's new courtyard cafe, but you may wonder at the relative clumsiness of its roof. Mather, known for his delicacy of touch, must have lost a battle with the accountants there. *Hugh Pearman*

"Hey, down here.

Every day you step on me...roll that chair over me.

Don't you realize how big I really am? I'm everywhere – in the walls, the ceiling, the floor. I'm part of this whole wire and cable infrastructure that shoots power, data, voice and video to every computer, telephone and pencil sharpener in this building. Those e-mails...those web pages, those frantic calls to that late-night pizza joint? That's us, babe. Point A to Point B. It's not as simple as you might think. And when you want to put some new high-tech doohickey in your office? You can thank my Interlink Activate™ inserts – they just pop in and out to adapt to any technology. Don't know all that? No problem – we're cool.

But please...take it easy with that chair, will ya?"

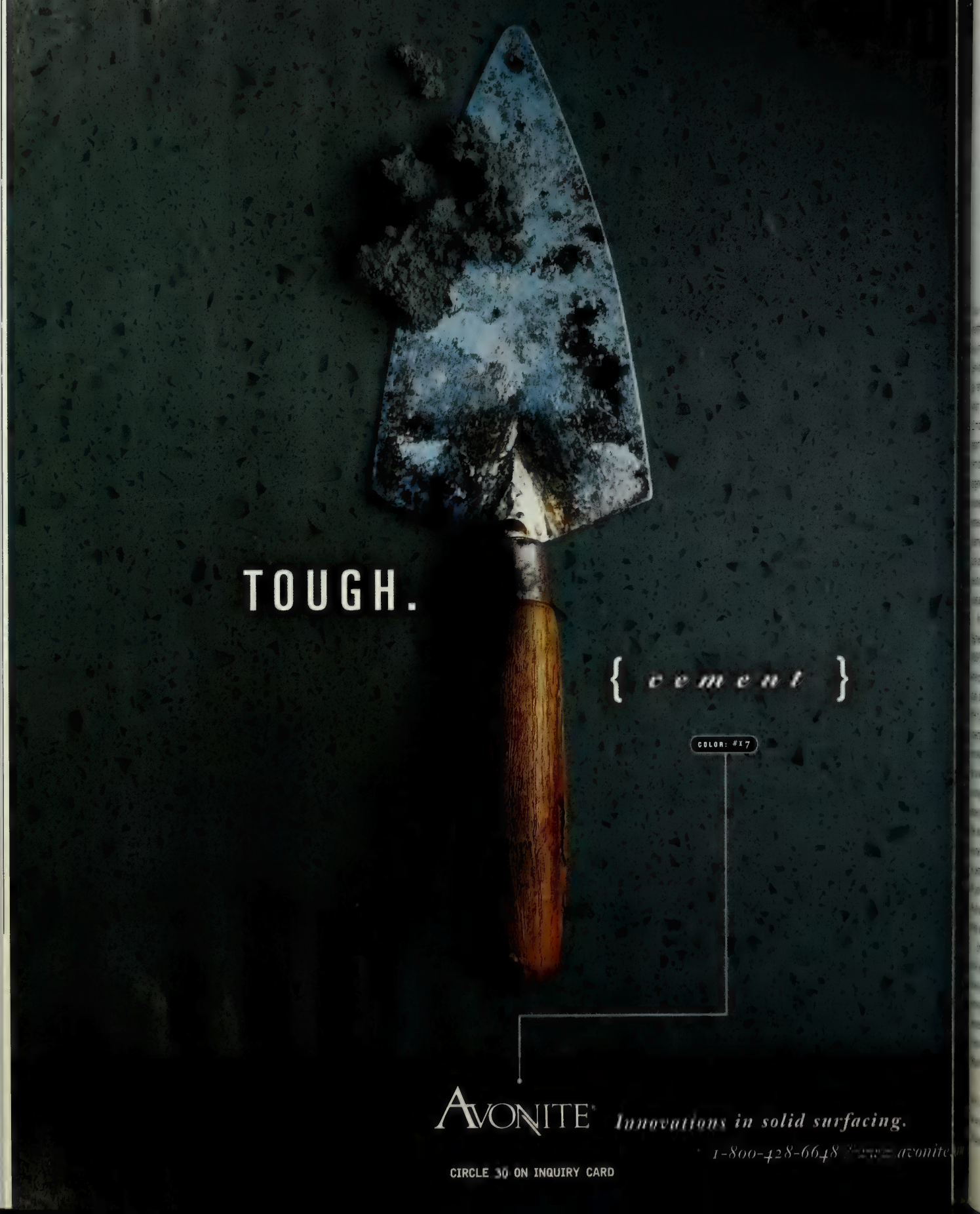


WIREMOLD®

WALKER® RC3 POKE-THRU

www.wiremold.com

CIRCLE 29 ON INQUIRY CARD



CIRCLE 30 ON INQUIRY CARD

Never underestimate the enemy (Or, what to do when the IRS comes a-knockin')

Practice Matters

By Mark E. Battersby

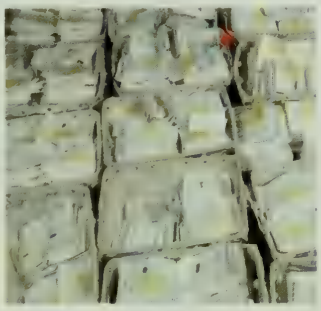
If you receive a call from the IRS this month, don't be surprised. Traditionally, in August the Internal Revenue Service (IRS) begins selecting those tax returns from the previous year which will be audited during the next 12 months. While the IRS' annual report reveals that less than 2 percent of individual tax returns are targeted for an audit, this rate is doubled for business owners and professionals. And now that the IRS is armed with a guide on architectural practices, the risk of an audit's resulting in additional tax bills is substantially higher.

In 1995, as part of its Market Segment Specialization Program (MSSP), the IRS studied a number of American architecture firms. The study probed how architectural practices run their businesses (i.e., how projects are documented, tracked, and billed) and where many of them fail to keep the necessary records, fail to categorize business expenses properly, and, in a few cases, how they avoid reporting all of their income. By helping the IRS' examiners better understand the nature of the architectural profession, the resulting guide points out those areas where architects are most likely to err.

Employing an improper tax year is one example. Generally speaking, all personal services corporations, partnerships and S-corporations are required to be on the calendar year. Exceptions are made only if the architectural practice can establish a business purpose for a different accounting period.

According to the IRS' annual report, over 85 percent of the returns audited contain errors and omissions. These can range from very simple oversights, such as failing to include the correct taxpayer identification number, to more complicated issues, such as misinterpreting a provision of the tax code. The complexity of our tax laws can be a pitfall for architects who may have made every effort to file a complete, accurate, and honest tax return.

Here is an instance in which a common method employed by architectural firms may result in errors owing to the complexity of the tax law: Many architectural practices do business as Qualified Personal Service Corporations, defined by the tax code as "any corporation substantially all of the activities of which involve the performance of services in the fields of health, law, engineering, architecture, accounting, actuarial science, performing arts, or consulting." Qualified Personal Service Corporations are permitted by the code to use the cash receipts and disbursements method of accounting. This means that, as a general rule, income is counted only when it is received but expenses are deducted when they are paid. This is a great advantage for any firm with a high level of accounts receivable. For accurate financial-reporting purposes, many firms keep their books on the accrual basis, by which income is included as billed and expenses are deductible when incurred. Such firms will then make year-end adjusting journal entries to bring them back to the cash basis for tax purposes by eliminating accounts receivable and accounts payable. Use of this dual method is perfectly legal but can be complicated. If errors are made in the translation from accrual to cash, a firm's return may be vulnerable to audit challenge.



Beware: The tax person cometh.

If selected, a firm must show its books and records to the IRS, either at the place of business (a field audit) or at an IRS office (office audit). The IRS admits the audit process can average 44 weeks. "In theory, the objective of the IRS and its auditors is to conduct an audit with a minimum of effort and disruption," says Alan J. Preis, a Certified Public Accountant who works in Florham Park, N.J. "In many instances, an audit requires as little as one or two days and results in no assessment."

Many sole practitioners and owners of small firms may decide to represent themselves at an IRS examination. They should be aware that, at any time during the audit, they may suspend the process by requesting the right to seek outside assistance and consult with a representative—be it a tax attorney, CPA, or the professional who prepared your practice's returns.

In the majority of audits, disputes arise not so much over interpretation of the tax law, but rather over which deductions can be documented. The IRS is aware, thanks to that MSSP study, that most architects keep complete records of their projects so that they are prepared in the event of litigation. More important, the IRS also knows that architects must carefully track the status and profitability of each job to make good business decisions. Thus, if an IRS examiner discovers missing or incomplete job files when it comes time to substantiate deductions, the MSSP report suggests that this is a strong indication of possible unreported income.

As a result of the MSSP study, the IRS knows how an architecture practice should work, what its tax year should be, which accounting method it should use, and even where to look for unreported income. Because the IRS is so savvy, it is important to select an appropriate tax professional. Preis suggests that architects approach the process of hiring an accountant as methodically as most clients select their architects. Interview extensively and try to find someone who understands the business of architecture and already has other clients in the profession.

The best method for reducing the risk of audits, however, is also the most obvious—be honest. Don't underestimate the enemy. The IRS doesn't just know about accounting. It also knows about architecture. ■

Mark E. Battersby is a financial and tax advisor with offices in the suburban Philadelphia community of Ardmore, Pa.

Building On Generations Of Experience



We're committed to the future! At EAGLE Window & Door we continue to offer a rich heritage of superior craftsmanship. Many of our employees are second- or third- generation window crafters, and remain the strength and heart of our business. That's why we're reinvesting in our community by building a new, state-of-the-art manufacturing facility. From the oldest, continually-operated window and door facility in the country (circa 1860's) to the newest, EAGLE is dedicated to carrying on a long-standing tradition. Isn't it time you experience a legacy in the making?



For information about EAGLE, call (800)453-3633 or visit our website at www.eaglewindow.com.

EAGLE WINDOWS · DOORS

© 2000 EAGLE Window & Door, Inc. - Dubuque, Iowa
An American Architectural Products Corp. Company

CIRCLE 108 ON INQUIRY CARD

Critique

By Richard Longstreth

No period in American architecture encompassed more sweeping changes, possessed a greater sense of dynamism, and approached the diversity of views and expression than the post–World War II era. During the period between the mid-1940s and the early 1960s, the United States enjoyed world leadership in what was then simply referred to as modern architecture. This was a significant change for a country that previously had persisted in embracing eclecticism and Art Deco rather than the radical agendas of the avant-garde.

This rich legacy is in trouble. For many years it was taken for granted. Much of it was later vilified, and most of it is now largely forgotten. Changing taste, new programmatic needs, improved systems, demands for more intense land use, and a host of other factors are placing many significant examples of postwar architecture at risk, and embarrassingly little is being done about it.

False sense of security

To a certain degree, a false sense of security exists because the most famous work of the mid-20th century appears to be safe. Skidmore, Owings & Merrill's Lever House in New York City and the Inland Steel Building in Chicago are protected by landmark ordinances, as are Ludwig Mies van der Rohe's Seagram Building in New York City and Lake Shore Drive apartments in Chicago. Frank Lloyd Wright's Marin County Civic Center in California is a National Historic Landmark, Richard Neutra's Kaufmann House in Palm Springs, Calif., has been lovingly restored by its new owners, and Philip Johnson's compound in New Canaan, Conn., will become a museum. Time after time in recent years threats to well-known and widely admired modern symbols of the postwar era have been met by onslaughts of protest and, for the most part, unsuccessful resolution.

Eccentric indulges in kitsch

When one looks beyond the rarified world of the most famous examples, the situation is very different.

Take the work of Bruce Goff, for example. As David De Long's meticulous research has shown, Goff ranks among the most original American modernists of the century and one of the few followers of Wright to develop his ideas in significantly new directions. But in many circles Goff remains cast as an eccentric who indulged in kitsch, designing peculiar houses in remote heartland towns. Little notice was taken when the 1956 Joe Price House near Bartlesville, Okla., one of Goff's greatest designs and one of the most extraordinary dwellings of the period, burned several years ago in a fire of suspicious origin. What will become of other Goff houses, lesser known and unappreciated except by a small band of devotees?

Several books and a major exhibition have failed to sufficiently broaden the public or professional consciousness to expect much protest against the destruction or insensitive remodeling of this work. One might argue that Goff is too far from the mainstream and that it is not fair to use him in projecting a general pattern. However, the prospects are seldom brighter for a host of other architects whose houses received considerable coverage and much praise in their day—from Harwell Hamilton Harris to Eduardo Catalano, William Wurster, John Johansen, Raphael Soriano, Fred Keck, O'Neil Ford, Paul Thiry, Charles Goodman, Paul Rudolph, Carl Koch, and Ralph Rapson.

Building types reshaped

Modern houses are a particularly fragile resource. Often they sit on land that has become very expensive; they are out of the public view and are too frequently appreciated by new owners more as real estate than for their historic value. But buildings experienced by hundreds, evens thousands, of people daily are no less vulnerable. The pioneering designs of Morris Ketchum and Victor Gruen, who



The Price House near Bartlesville, Okla., is considered one of Bruce Goff's greatest designs. The house burned in a suspicious fire.

Richard Longstreth is professor of American civilization and director of the Graduate Program in Historic Preservation at George Washington University, Washington, D.C. He just completed a two-year term as president of the Society of Architectural Historians.

marshaled Modernist ideas to redefine local retail centers as regional shopping centers, have been completely marginalized, although they were heralded as major accomplishments by the architectural press in their day. Forgotten, too, has been the seminal work of Ernest Kump in reconceptualizing the public school as an informal assemblage of pavilions and open space. Journalists, practitioners, educators, and many others have become so infatuated with formalist critique that many tend to forget that mid-20th-century Modernism was driven as much by a search for programmatic innovation as by the pursuit of aesthetic and technological virtuosity. Modern architects helped reshape nearly every building type—a point that is rarely articulated today. Eero Saarinen, for instance, redefined the air terminal, Mies and SOM did the same for the office tower, and Louis Kahn redefined the art museum.

The endangered Cyclorama Building by Richard Neutra serves as the visitors' center at Gettysburg National Military Park.



Hostile preservationists

With some notable exceptions, preservationists are not taking the lead to protect the recent past. On the contrary, many of them seem conspicuously nervous, sometimes even hostile, regarding mid-20th-century modern architecture.

A striking example of the failure of what is now a well-established process to protect work of exceptional caliber can be found with the Cyclorama Building (1959–62) at Gettysburg National Military Park in Pennsylvania. Designed by Richard Neutra as the visitors' center, the Cyclorama Building was the flagship of the National Park Service's Mission 66 program and one of the most sophisticated works commissioned by any federal agency on home soil during the period.

Characterized by a contrasting huge cylinder and ramp leading to an observation deck overlooking the battlefield, the Cyclorama Building stands as an important capstone to Neutra's long career. It is one of the most accomplished large-scale

Today's environments demand more from their shades...

Style, protection, view and alignmen



© Copyright 2000, MechoShade Systems, Inc., Long Island City, NY. All rights reserved.
MechoShade and ElectroShade are registered trademarks of MechoShade Systems, Inc. of Long Island City, NY.

Neutra projects exhibiting the dynamic, conflicting qualities that interested the avant-garde between the world wars. Poorly maintained by the Park Service for over two decades, it has not aged gracefully.

The Pennsylvania State Historic Society and the president of the National Trust approved an initiative by the current park superintendent that calls for the demolition of the Cyclorama Building to make way for a faux restoration of the battlefield site. Subsequent efforts to validate the building's significance have met staunch resistance from Park Service leaders, even though the building does meet criteria as a National Historic Landmark. The Advisory Council on Historic Preservation stands firm with the Park Service, insisting that a Modernist building detracts from the battlefield and that the two should not continue to coexist. Others remain indifferent, believing that because the building is not, after all, a textbook classic, it may not warrant a preservation effort. Many of the leading architects and historians who support the Cyclorama Building's preservation—including J. Carter Brown, director emeritus of the National Gallery of Art; Robert A.M. Stern, FAIA, dean of the Yale School of Architecture; and Neutra biographer Thomas Hines—predict that the time will soon come when its loss will be seen as a major breach of faith by those charged with protecting the nation's historic resources. The impending destruction of the Cyclorama Building, no less than the recent loss of the Joe Price House, is symptomatic of our ignorance and neglect of Modernism's legacy.

ONCE CONTEMPORARY ARCHITECTURE LOSES THE CACHET OF NEWNESS, WILL IT BE CONSIGNED TO OBLIVION?

Disappear with little notice

If important works by internationally renowned figures disappear with little notice, much less debate, what about the broader body of significant architecture that did so much to shape the 20th-century landscape? What will become of buildings created by the Kochs, the Wursters, the Sorianos, the Kumps, and the many others that figured in major ways?

A few major monuments may symbolize an era, but they do not define it. Work that is a part of our everyday lives is crucial to understanding the past and, equally important, to giving us a yardstick for what we ourselves do. If Modernism is regarded and treated as an impermanent phenomenon, it will ultimately have little impact on shaping the future. If it is, instead, to accrue meaning over time, the work itself must endure. Architects should take a much more active role in assuring the preservation of our modern architectural heritage. Unlike many preservationists, architects understand that heritage and know that mid-20th-century Modernism is one of their profession's greatest legacies. What happens to that legacy can tell us much about how we will value the architecture of the present and of the future.

Once contemporary architecture loses the cachet of newness, will it be consigned to oblivion, known to later generations only in photographs? The forces of change have accelerated to the point where we cannot allow the new to become unquestionably old before we take steps to protect it. We risk losing an important part of the record. ■




Both patterns
are guaranteed
for a lifetime.
CHAMELEON
Lifetime Warranty
COLLECTION
P.S. The inventor of modern wall protection, breaks the mold once again,
introducing The Acrovyn Chameleon Collection, the only patterned wall
protection guaranteed for a lifetime. That's right, a lifetime! Because we've developed
a proprietary surface bonded process that seals the pattern inside the protective
The Acrovyn Chameleon Collection, another reason nothing else is Acrovyn.
For more information call 1-888-621-3344 or visit www.c-sgroup.com.
C/S Acrovyn® Chameleon Collection™
CIRCLE 32 ON INQUIRY CARD

Urbanism of the new and everyday varieties inspires a trio of books

Books

By Clifford A. Pearson and John E. Czarnecki

Suburban Nation: The Rise of Sprawl and the Decline of the American Dream, *by Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck. New York: North Point, 2000, 290 pages, $30.*

Summing up more than 20 years of experience administering first aid to the wounded American landscape, the authors of *Suburban Nation* cover a lot of ground (no pun intended). From the roots of sprawl in the federal government's subsidies of highway construction and home mortgages to the fraying fabric of certain inner-city neighborhoods, this book provides a clear-eyed overview of what's gone wrong with postwar development in the U.S., why it happened, and what can be done to fix it.

Duany and Plater-Zyberk, the king and queen of New Urbanism, along with Speck, the director of town planning at Duany Plater-Zyberk & Co., write the kind of prose everyone can understand and include information that gets attention. For example, in explaining the paving of America, the authors note that the city of Houston "provides the equivalent of 30 asphalt parking spaces per resident" and that the Virginia Department of Transportation Regulations describes trees lining state roads as "FHOs: Fixed and Hazardous Objects."

None of this story is new, and people who have heard Duany and Plater-Zyberk speak at conferences will find most of their findings familiar. But to pull together all their observations and prescriptions for healing the physical environment and to do it in such an accessible manner is an impressive accomplishment. The book addresses both the physical and policy aspects of suburbia and suggests what architects and laypeople can do.

Whether or not you agree with the solutions offered by Duany, Plater-Zyberk, and Speck, it's hard to argue with their diagnosis of what ails our metropolitan regions. As they explain at the beginning of this book, "The problem with suburbia is not that it is ugly. The problem with suburbia is that, in spite of all its regulatory controls, it is not functional: it simply does not efficiently serve society or preserve the environment." *Clifford A. Pearson*

Charter of the New Urbanism, *by the Congress for the New Urbanism. New York: McGraw-Hill, 1999, 160 pages, $50.*

An important work that defines the tenets of New Urbanism, this book serves as the group's manifesto. The charter illustrates the 27 principles of New Urbanism, from the scale of regions to neighborhoods and buildings, and pairs each with an essay by a different author. Now followers of the movement can use the charter to defend their work and detractors can refer to it when presenting their side of the debate.

Graphically pleasing, the book reads well but appears staid and reserved. The subject should be vibrant and alive, but instead some of the authors lapse into the repetitive rhetoric that offers critics easy targets in countering the New Urbanists' approach.

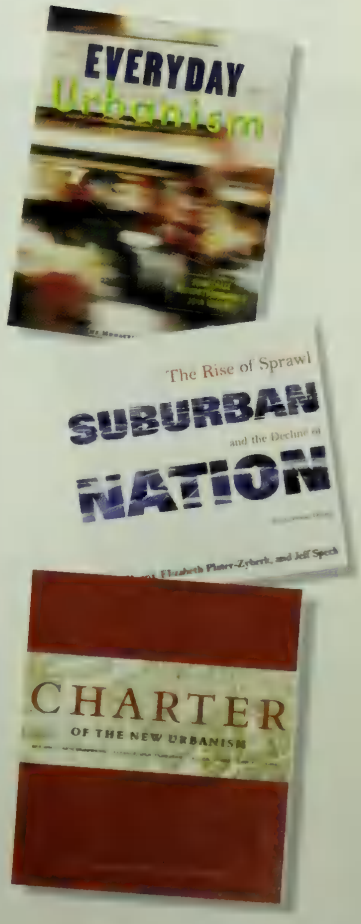
When defining the problems of today's development patterns, the text is clear and seductive. However, the solutions posed by the charter are rooted in a predominantly upper-middle-class American baby-boomer ideal of a city. In his essay, Harvey Gantt asks, "If the goal of New Urbanism is to rekindle the American Dream (admittedly an ephemeral and spiritual goal) ... then a significant thrust of this movement must focus on the existing core city." Certainly this is true, but whose American Dream is being rekindled? Why must the focus be American? The test of the Charter of New Urbanism will be its timeless quality. Will students and practitioners refer to the charter in 30 years as they do with Jane Jacobs, Kevin Lynch, or Christopher Alexander? *John E. Czarnecki*

Everyday Urbanism, *edited by John Chase, Margaret Crawford and John Kaliski. New York: Monacelli, 1999, 256 pages, $40.*

The making of small, distinctive public spaces is the focus of *Everyday Urbanism*. It is these spaces, rather than the overly designed ones by architects and landscape architects, that collectively make cities interesting, the editors assert.

"Twentieth-century designers have found it nearly impossible to forge approaches that empower, rather than simulate, urban spontaneity. Urban designers must incorporate these elusive elements: ephemerality, cacophony, multiplicity, and simultaneity," writes John Kaliski, one of three Los Angeles–based editors of the book.

Everyday Urbanism's essays, by a variety of architects and writers, fall into two sections: "Looking at the City" and "Making the City." The most substantive work is by Kaliski and Crawford, who initiated



the concept for the book with a series of urban design studios at SCI-Arc. Crawford makes a compelling case for rethinking conceptions of public space and identity. Kaliski, who is also a practicing architect as well as a teacher, critiques urban design as a profession and ends with a comparison between the two current poles of urbanist thought: "New Urbanists retreat to mythohistoric narratives while Koolhaas' Generic City projects a hypermodern dystopia of city as shopping mall."

The remainder of the book contains a mixed bag of essays making the case for alternate urbanisms, some more relevant than others and all culled from experiences in California. As a whole, though, *Everyday Urbanism* is a welcome collection in which everyday places are celebrated. *John E. Czarnecki*

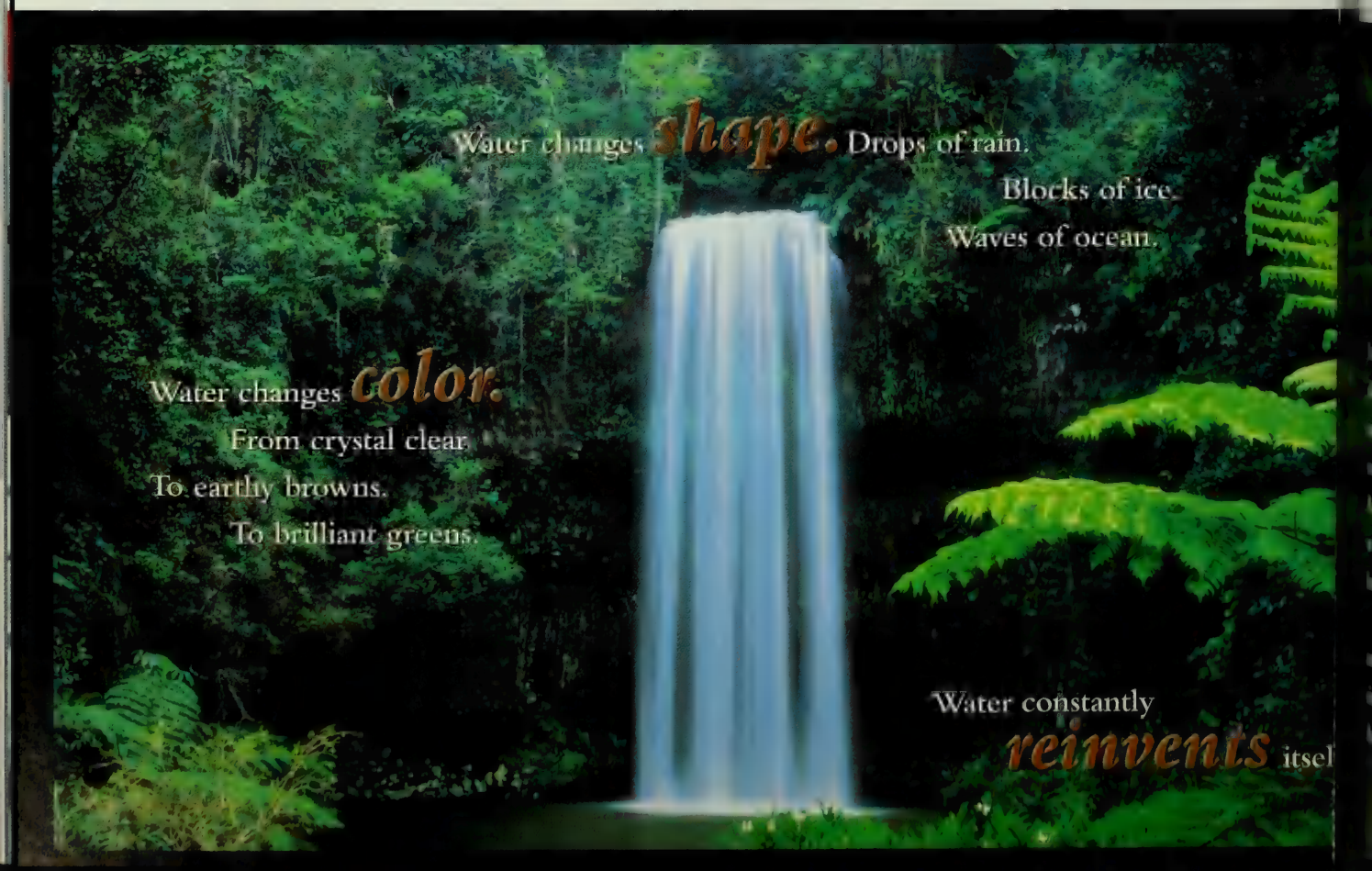
Starck, *with essays by Sophie Tasma Anargyros, Ed Mae Cooper, and Elisabeth Laville. New York: Taschen America, 2000, 448 pages, $40.*

The cover of this comprehensive new book on Philippe Starck's work—which features a shirtless Starck with cryptic phrases such as "God Is Dangerous," "We Are Mutants," and "Tomorrow Will Be Less" written across his torso—suggests an abstract look at his work. Instead, *Starck* is a straightforward collection of almost 1,000 images of the man's witty and functional designs. While each image is identified only by name, city, and year, an overview in the back of the book provides a bit more information (though not nearly enough for someone looking for an encyclopedic account of the designer's projects and products).



The monograph divides Starck's work into four categories: architecture, interiors, furniture, and industrial design. Projects include hotels such as the Royalton and Paramount in New York, St Martins Lane in London [JANUARY 2000, page 90], and the Delano in Miami Beach, as well as restaurants such as Asia de Cuba in New York and Felix above the Peninsula Hotel in Hong Kong. Starck's diversified product designs for Driade, Flos, Kartell, Alessi, and Cassina, among others, are covered extensively and include home electronics, lighting, toothbrushes, a motorcycle, and StarckNaked, a transforming garment for women. Starck's "Good Goods" catalogue, a collection of "non-products for non-consumers" (another Starckism), includes objects as disparate as a gas mask, a kayak, and organic basmati rice. Accompanying the designs are photos of Starck expressing himself in a variety of humorous ways, and silly cartoons of Starck with French captions in the spirit of the "Drawn Out Dramas" on the borders of *MAD Magazine*.

The book ends with interviews with the designer by Elisabeth Laville and Sophie Tasma Anargyros, and a short essay by Ed Mae Cooper, translated into English, German, and French. *Starck* perfectly captures the personality of its famous subject and is a colorful addition to any contemporary design library. *Rita Catinella*



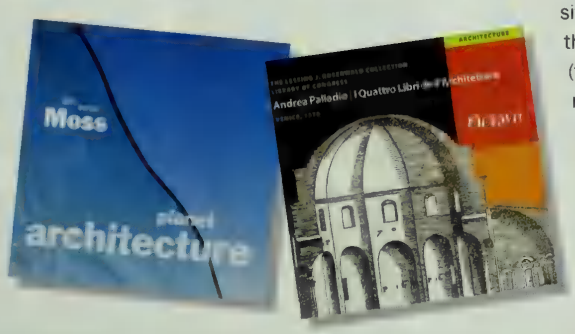
New Media

Planet Architecture, *CD-ROM series. Los Angeles: in-D Design & Production, for Mac and Windows platforms, $30 (www.in-D.com).*

Digital technology for architectural design has matured at a speed that would make even a Pentium chip blush with embarrassment, but technology for the display of architecture has lagged well behind.

In-D, an electronic publishing company, has sought to rectify this lapse with a series of CD-ROMs called, collectively, *Planet Architecture*. The series now comprises five one-disc volumes, divided into two categories: monographs and building typologies (with projects by a collection of architects). Monographs include work by R. M. Schindler, Will Bruder, and Eric Owen Moss. The first two building-type collections present recent houses from architects such as Morphosis, Rick Joy, RoTo, Mark Mack, Scogin Elam Bray, Bruder and Moss.

Each disc contains pictures of the various projects, plans, interviews with the architects, and virtual-reality representations of several interiors. The methods for displaying the photos vary from disc to disc, as does their effectiveness.



The virtual-reality sequences suffer from a lack of adequate technology. Stitched together as several contiguous, flat images, these virtual sequences are too small to show anything in detail and are distorted, as if seen through a fish-eye lens.

The architect interviews are by far the most valuable part of the product. The editors of the discs stay invisible, and the architects go into some depth on their design philosophies and the specifics of their projects, especially on the monograph CDs, which are particularly interesting. The discs have gotten progressively better at exploiting the available technology (the Eric Owen Moss monograph is the most recent release), and the $30 price is still less than most large-format architecture books. And books don't talk.

Kevin Lerner

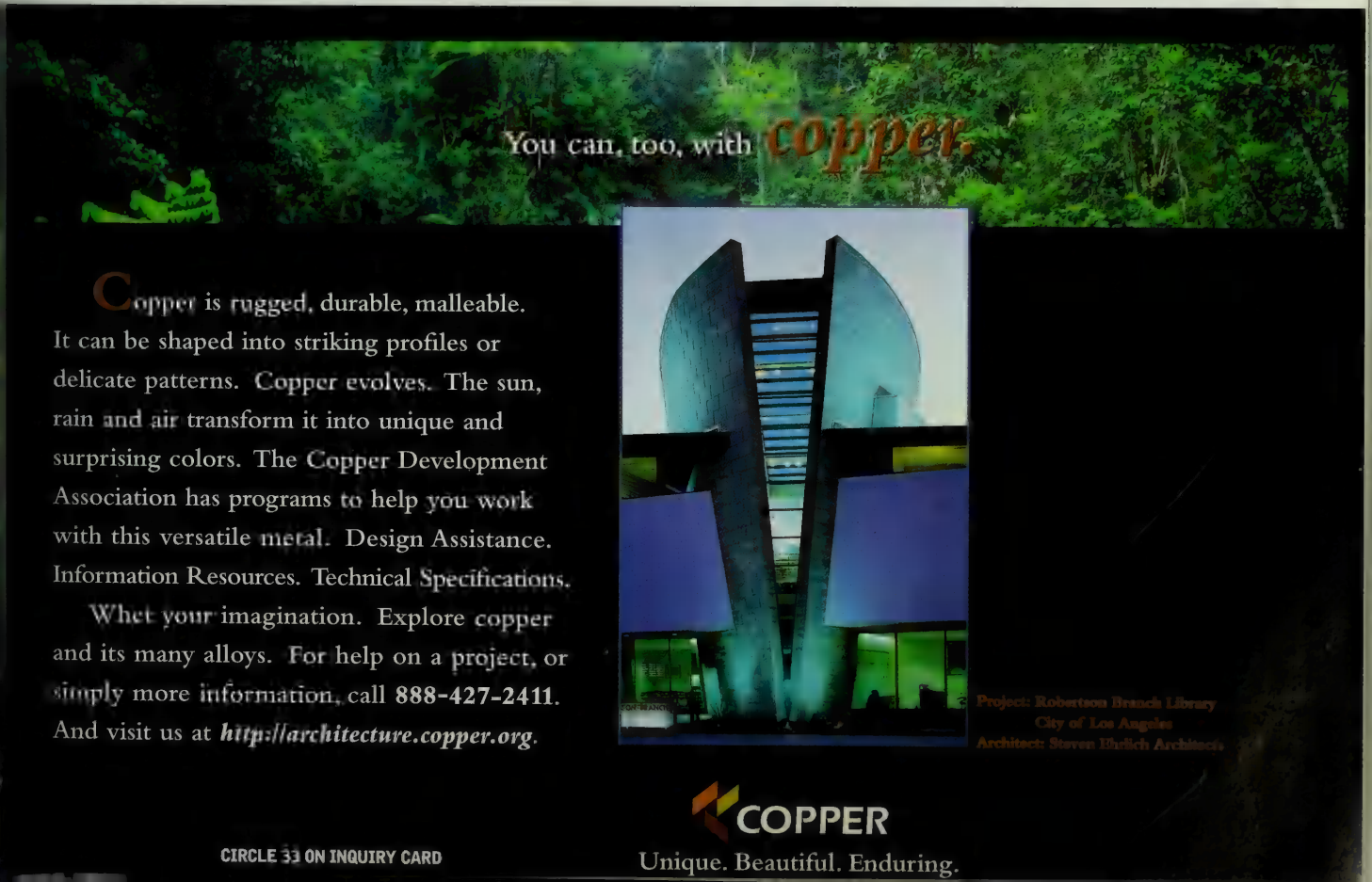
I Quattro Libri dell'Architettura, *by Andrea Palladio. Oakland: Octavo Corp., $45.*

This reproduction of Palladio's *I Quattro Libri dell'Architettura* does not pretend to be much more than a faithful, sumptuous facsimile of a rare first edition. Nor does it need to be much more to be a worthy addition to a digital library.

The book, which comes on one disc, is presented in high resolution as an elegant, full-screen Adobe Acrobat file. Palladio's illustrations can be copied and reproduced in other programs, and the text—both the original Italian and the English translation—is searchable. Robert Tavernor, a professor of architecture at the University of Bath, provides an introduction to Palladio's work and to his book.

If you've ever wanted to see the original edition of this classic or copy its drawings without pressing the 430-year-old tome into a photocopier, this version should satisfy.

Kevin Lerner



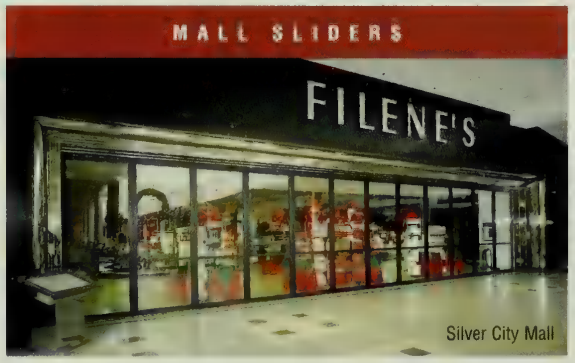
We've got a Lot in Store











At The Vistawall Group, we've helped create major malls throughout the country. Talk about store credit.

From our curtainwall and skylights to our custom windows and doors, our products enhance some of the nation's finest meccas of merchandise.

We're your single source supplier: designing, engineering and manufacturing custom products for everything from major shopping and retail centers to the corner convenience market.

The Vistawall Group. We've got a lot in store.

THE VISTAWALL GROUP
BUTLER MANUFACTURING COMPANY

800-869-4567
fax: (972) 551-6264
http:\\www.vistawall.com

The Vistawall Group
Butler Manufacturing Company

VISTAWALL ARCHITECTURAL PRODUCTS
MODULINE WINDOW SYSTEMS
NATURALITE SKYLIGHT SYSTEMS
SKYWALL TRANSLUCENT SYSTEMS

CIRCLE 34 ON INQUIRY CARD

Dutch architect Lars Spuybroek of Nox gets visionary in Nantes, France

Exhibitions

by Claire Downey

Riding the high-speed TGV train from Paris to Nantes, you can easily imagine being propelled in a time capsule. A picturesque landscape of farms and small chateaux, seemingly unchanged over two centuries, flies past the window. The scenery lulls the senses into a state of nostalgic bliss, which is probably the best way to arrive at Nantes' academic, classical Musée des Beaux-Arts to see the *Vision Machine* exhibition. Passersby would never suspect what lies within, particularly the centerpiece of the show, a walk-in environment designed by Lars Spuybroek and his Rotterdam-based firm, Nox.

Nantes, on France's Atlantic coast, is the birthplace of Jules Verne, the 19th-century visionary novelist whose *20,000 Leagues under the Sea* (1870) and *Journey to the Center of the Earth* (1864) took his readers on fantastic adventures into the unknown. As part of France's ambitious cultural calendar for the year 2000, the city of Nantes has organized five exhibitions around the theme "Jules Verne and Imaginary Worlds." The *Vision Machine* exhibition is certainly the most audacious of the group, although the one with the least obvious link to the imaginative writings of Verne.

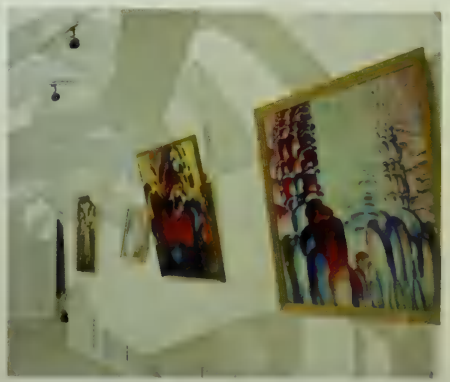
Filling the first-floor atrium and gallery spaces, *Vision Machine* celebrates artists' fascination with exploring the limits of space and perception via technical advances from the end of the 19th century to the present. To illustrate this theme, exhibition curator Arielle Pélenc has chosen over 250 works of architecture, video, painting, and photography for display by such artists as Tanguy, Matta, Finsterlin, and Claude Parent. Many of the pieces are contained within Spuybroek's own three-dimensional setting.

The title, *Vision Machine*, comes from the project that the artist Frederick Kiesler developed between 1938 and 1942 in his New York–based Laboratory for Design Correlation at Columbia's School of Architecture. Kiesler wanted to create an audiovisual machine that could emulate the process of vision, the passage of the image to the brain, and then the interpretation of that image—both consciously and subconsciously—by the artist.

Kiesler's machine would take into account the latest techniques for measuring light, sound, and thought patterns. Unfortunately, not everything he needed existed at the time and he never completed his study. Kiesler did realize several "biotechnique" installations, including the Mobile Home Library [SEPTEMBER 1939, page 60], and left hundreds of drawings, some of which are exhibited in Nantes.

Spuybroek's new version of a *Vision Machine* covers 2,000 square feet of the central atrium of the museum. Upon entering this all-white landscape, where even the floor plane rises and turns, vis-





In the central atrium of the turn-of-the-century Musée des Beaux-Arts in Nantes is a futuristic *Vision Machine* (top). The fluid form is both a work of art and an installation for viewing art (right).

Claire Downey is an international correspondent for RECORD *who lives in Paris and serves as editor of* This City Paris, *a quarterly English-language magazine on Paris culture.*

itors have the impression of walking onto a wave.

Spuybroek describes his project as a "wet grid," a fluid architecture defying its Cartesian plan. According to the Dutch architect, Cartesian grids split the world into two planes—horizontal and vertical. For example, in the atrium, the eye looks up as the body walks forward. To reunite movement and vision, Nox Architects began the design process by calculating the location of eight parallel double lines running at eye level from the entry to the rear of the museum. With the aid of a computer, they then created a "dynamic vortex," using the same program a filmmaker uses to simulate the effect of a tornado. The lines were spun up and out. Taking the resulting diagram off the computer, Spuybroek and his team at Nox then followed the new line pattern with stiff strips of paper, using paper clips to hold them together at points of contact. From this makeshift model they were able to find the points at which the strips were self-supporting. Back at the computer, the architects translated the model into a real structure.

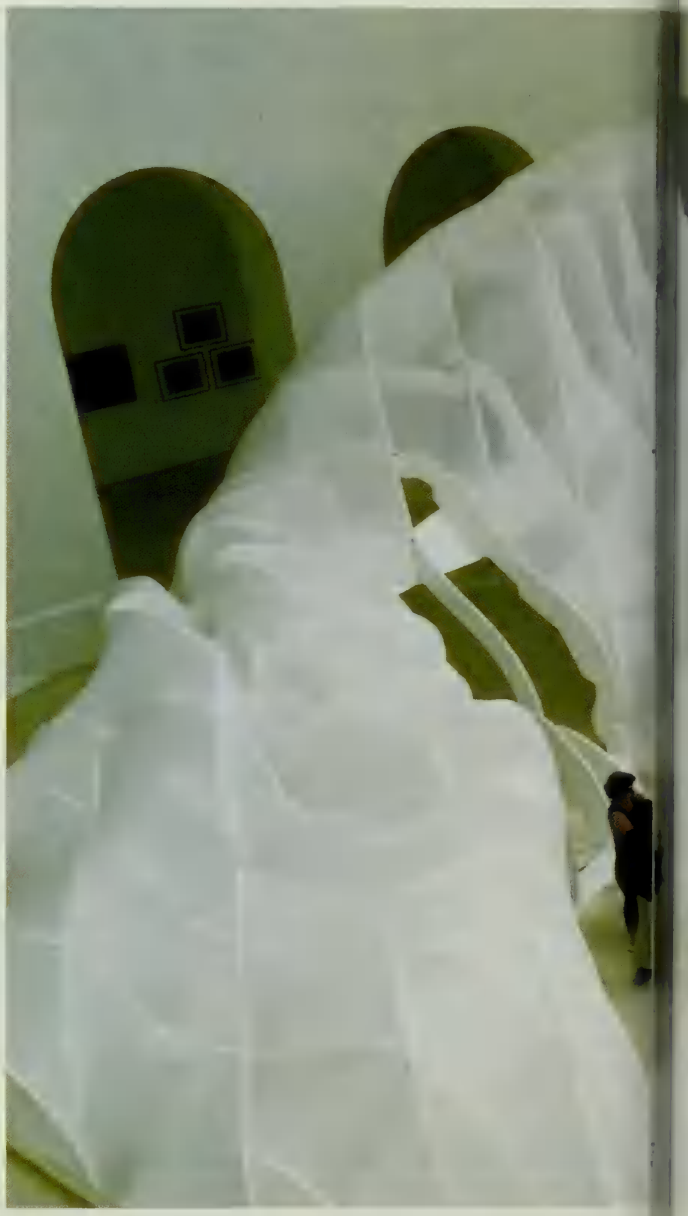


The resulting skeletal structure is made entirely of painted wood and covered with stretched white fabric. Interior space takes its form almost by chance, yet it is inside these peaked spaces that much of the artwork, including paintings by Klee and "X-ray" photography from the turn of the century, is hung. The structure is both a work of art and a machine for seeing.

Here "vision machine" refers to the relationship of the viewer to the art and the space. It could be argued that all museums are a type of vision machine, yet the Nox project aims to facilitate a dynamic between our bodies, which are in perpetual motion, and the art, which is an act of creation. It's difficult to say whether the interior space—which at some points is very narrow—eases our perception of the art, but it certainly doesn't interfere. It is successful in being both dynamic and intimate at the same time.

Some of the work in the show amplifies this theme remarkably. For instance, the Orgone Helmet, created in 1996 by Studio Van Lieshout, completely covers the head and shoulders, allowing no light to enter. This not only deprives the wearer of sensory perception but is intended to promote clear thinking.

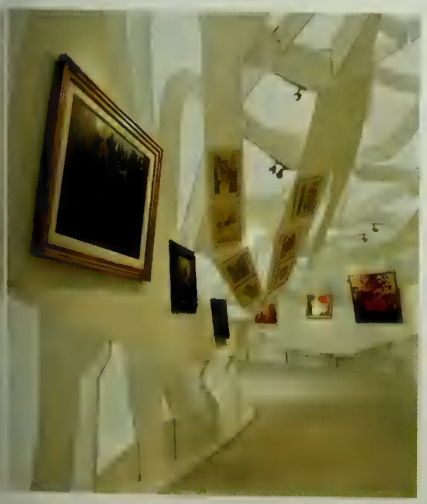
Some of the architectural drawings and models on display might seem dated in comparison to the Nox design. Instead, it puts them into a context of continuity. Projects like Coop Himmelblau's 1967 Villa Rosa and Archigram's "Instant City," designed in 1968, invited us to radically change our mode of living—which we haven't done. Nor have we taken Jules Verne's lead and traveled to the center of the earth, but as this exhibition points out, for every new advance that we do embrace, there are always visionaries who will push us to go even further. ■





The skeletal structure is made entirely of painted wood and stretched white fabric (top) and covers 2,000 square feet in the central atrium of the museum (near right). The peaked interior spaces display much of the artwork and photography depicting visionary subjects, selected by curator Arielle Pélenc (far right).







PAREX EIFS

EXTERIOR INSULATION AND FINISH SYSTEM

We have the System you need.

If you need a secondary moisture barrier...

YOU NEED KEYCOAT

New Liquid Membrane Adhesive 395A

A proven 100% acrylic water resistant membrane **plus** an EPS adhesive in a single coat.



PAREX®

100% ACRYLIC POLYMERS

MEMBER OF EIMA

800-537-2739 PAREX Inc. Headquarters: 1870 Stone Mountain-Lithonia Rd, Redan, GA 30074
800-780-6953 Western Region: 11290 South Vallejo Court, French Camp, CA 95231
www.parex.com

CIRCLE 35 ON INQUIRY CARD

Writhing forms and biomorphs invade Venice for this year's Biennale

Exhibitions

By Michael Stanton

The seventh Venice Biennale (www.labiennale.org) runs June 18–October 29. Held at the Giardini di Castello and Venice Arsenale, it includes work by hundreds of architects from around the globe.

Installed in every pavilion of the sprawling Giardini, the city's public gardens, and inside the equally expansive historic shipbuilding area of the Arsenale, the Venice Biennale of Architecture presents miles of forms and millions of words relating to those forms. The volume of material and its international profile alone make this exhibition significant.

Like its more venerable sibling, the Art Biennale, with which it alternates years, this show is vast but not comprehensive. As always, the bias of the curator heavily influences content. In this case, Roman architect Massimiliano Fuksas imposed his professional concern for the look of architecture, assembling a festival of shimmering and writhing shapes dedicated to the topic "Less Aesthetics, More Ethics." Given the nature of the work that Fuksas chose for the sprawling areas of the Italian pavilion and Arsenale, the title of the exhibit seems somewhat ironic. The show contradicts its theme by displaying maximum aesthetics and is impressive as such.

This said, there seems to be a remarkable degree of uniformity in the exhibit curated by Fuksas. Biomorphs dominate with projects by Ben van Berkel, Lars Spuybroek, Wiel Arets, and MVRDV from the Netherlands. Few Swiss appear. The sparse American showing includes work by Greg Lynn, Michael Bell, Asymptote, Reiser + Umemoto, and Diller + Scofidio. The exhibit reveals that problems continue to plague the 100-year history of biomorph vocabulary, which began with Art Nouveau and followed through various episodes of Expressionism, from Catalan Modernismo and Erich Mendelssohn's projects of the 1920, to Deconstructivism's brief moment in the late 1980s.

Michael Stanton, an architect teaching in Beirut, has directed international workshops in Venice and Barcelona.

From the virtual to the built

Biomorphism is inevitably associated with rhetoric hailing a new architectural revolution, defiance of the orthogonal, faith in the organic, and—at least to this observer's eye—a naïveté about the way the projects are expressed architecturally. In addition, these shapes remain hard to construct, as is demonstrated by the exhibition's few attempts to move them from the virtual realm into built form.

The U.S. pavilion features the work of Hani Rashid and his students at Columbia University and Greg Lynn with his UCLA studio. (Lynn also has work at two other venues, the gallery curated by Fuksas and the Austrian pavilion.) A central theme of the U.S. pavilion, where the Columbia and UCLA students can be seen working on further iterations of their projects, is new technology and its applications. The idea is that the pavilion be an architectural test space and a contemporary research laboratory, not just an exhibition venue. While student work can be visually beguiling, it is, by definition, immature. To show such work adds to the inevitable impression that image, light, color, and curve are more important than substance.

The real star of the Biennale is the medium of video/computer projection. Most spectacularly this format dominates the Corderie dell'Arsenale, which is lined with a 900-foot-long screen with continuous video images of metropolitan sprawl—social conflict, pollution, the





Slicing through the Corderie dell'Arsenale is a 900-foot-long screen projected with video images of urban sprawl (above). Hani Rashid and his Columbia students developed "Performance Modules" (left) for the U.S. pavilion.

plight of refugees, new social centers, airports, and shopping centers—and includes interviews with 50 prominent architects. The coordination of this feat of projection and the visuals presented are the Biennale's greatest achievement, and the Corderie is its most successful space.

Browsing the digital world

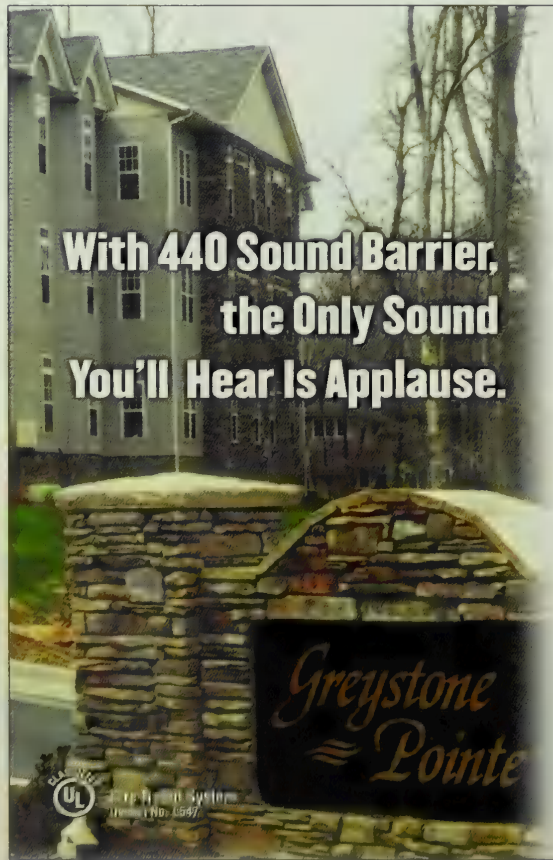
With rare humor, the Dutch pavilion engages visitors with hospital beds that can be adjusted at the touch of a joystick and with computer monitors available for browsing the digital world. One is asked to remove oneself from the immediate surroundings of an exhibition and enter that of the office or home. While this is potentially an interesting shift, here it ends up being just tedious and alienating.

The Biennale both explodes through excess and underlines through repetition the insistent questions raised by computer technologies. The show itself is dazzling, a long day (at least) of exposure to many international purveyors of image, if not ethics. Moments of it are individually sensational, like the street of monitors displaying talking-head architects shot against vivid pink, orange, green and blue electronic backgrounds in the Italian pavilion. All these famous architects declaim in a neutral din, replacing one another on video screens with the speed of TV commercials.

Unlike the imposing Art Biennale of last year, this show was largely unfinished on the first day of previews (architects will be architects) and was largely unpublicized, even in Venice. This haphazard and clandestine quality emphasizes the somewhat marginal status of architecture in today's larger cultural debates. ■



Where the virtual becomes real: a portion of the U.S. pavilion.



Go to your lumber yard for the floor system that gets a standing ovation

The professionals agree: sound control is one of the most important considerations for buyers of upscale condominiums. Builders from North Carolina to California have discovered that nothing deadens noise better in walls and floors than 440 Sound Barrier.

Lightweight, nailable and load-bearing, Sound Barrier can be installed in wall systems or directly under carpet pad, laminate floors and many other surface treatments. Unlike pumped-in concrete, it won't crack, break down or "dust up." Because it can be installed by the crew laying the floor or putting up the walls, in virtually any weather, Homasote installation won't delay construction. And with hundreds of units, this adds up to significant savings.

Superior sound deadening and lower installed cost are two reasons cited by the master condominium builders who specify 440 Sound Barrier, including Heritage Builders, Beaver Construction, Bostic Brothers and Simonini Custom Builders.

Environmentally friendly

Homasote is made from 100% recycled paper, with no asbestos or urea formaldehyde – a major selling point with today's sophisticated consumer.

Proven to work in independent tests

The Homasote system is proven by NVLAP certified labs; Homasote is a fire-rated material approved by Underwriter Laboratories (UL and ULC approved for use in all L500 floor & ceiling assemblies per the 1999 Fire Resistance directory; call for details.)

For more information on Homasote 440 Sound Barrier, call 800-257-9491, or visit us at www.homasote.com

440 SOUND BARRIER™
Acoustical Control Systems
Sound Deadening That Will Floor You.™

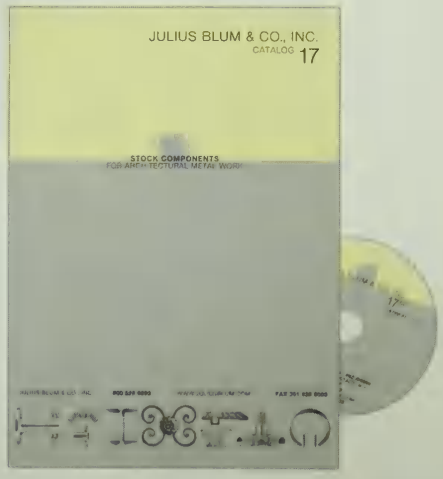
homasote COMPANY
800.257.9491
www.homasote.com

CIRCLE 36 ON INQUIRY CARD

17

CATALOG 17
YOUR COMPLETE SOURCE FOR ARCHITECTURAL METAL COMPONENTS

Julius Blum & Co., Inc. is proud to announce the arrival of its Catalog 17. Continuing the tradition of attention to style and detail, Catalog 17 includes product information on our traditional and contemporary metal components in aluminum, bronze, nickel-silver, steel and stainless for use in handrails, elevator cabs, building facades and other architectural applications. Each catalog includes a CD with downloadable CAD drawings. Call, write or e-mail for your **free** copy.



JULIUS BLUM & CO., INC.

P.O. BOX 816 CARLSTADT, N.J. 07072-0816

800 526 6293 WWW.JULIUSBLUM.COM **FAX 201 438 6003**

e-mail: bluminfo@juliusblum.com

CIRCLE 109 ON INQUIRY CARD


wallboard + mouse = nationalgypsum.com
Making expert decisions has never been simpler. Just log on to nationalgypsum.com fo the most comprehensive gypsum products information on the web. Designed for eas of use, it's the only formula you need to make expert decisions, and just what you expect from the gypsum industry's service leader.
National Gypsum COMPANY
CIRCLE 37 ON INQUIRY CARD
www.nationalgypsum.com
1.800.NATIONAL

Snapshot



Tales from the crypt: Style goes underground

In the towns and cities of Mediterranean Europe, cemeteries are traditionally walled precincts situated outside the town. People of modest means inter their dead in niches in the walls, at least for as long as they can pay the rent (after a certain period, the bones are usually removed to a common ossuary).



Wealthier citizens own family tombs and mausoleums, which are set in ordered plots amid the walks and cypress trees within the cemetery walls.

The crypt shown here, an addition to the municipal cemetery of Zumárraga, in the heart of Spain's Basque country, combines this typology with that of an older Roman precedent, the catacombs. Zumárraga's original 19th-century cemetery lacked space for expansion, as the town had grown up around it. José A. Pizarro, then the municipal architect and now based in San Sebastián, convinced





the town fathers that the cemetery could be extended underground. He cleared the family tombs within the walls, leaving an open space of walks and grass that allows the precinct's amphitheater shape to become clearly visible. A central stair leads down to two parallel underground galleries, which are lined with more than 600 niches, as well as spaces for ossuaries. The galleries terminate at each end in two "ceremonial" or "expressive" rooms with matching sculptures: to the left, in a dark space of smooth curving walls, the black marble *Spirit of Evil,* by Reinaldo López; to the right, under an elaborate tracery of crossing beams pierced by direct sunlight, the sculpture *Angel* in green bronze, by artist Vicente Larrea.

As these symbolically charged chambers suggest, Pizarro designed the crypt with a certain theatrical flare. The drama extends from the dark Baroque flourishes of the descending entry threshold to the solemn rhythm of pilasters and beams that mark the underground walls and ceilings, and the oppressive low-arched openings that connect the galleries. The dusty air (the crypt is cleaned only once a year, for All Souls' Day, November 1) is dramatically pierced by narrow shafts of natural light. The lawns between the garden walks above are slightly raised, allowing light and ventilation to enter through small clerestory openings, while other shafts allow vegetation to take root underground. At the entry to what he calls his "City of the Dead," Pizarro has placed an inscription that reads, "This parochial cemetery was established for men, who die only once, and for the Final Judgment." Here, a provincial essay in Post Modernism has produced an eerie classic. ■

In a modern take on the tradition of catacombs, the eeriness is pierced only by a few shafts of natural light (above). More than 600 niches line the walls of two parallel galleries (previous page).

CONTRIBUTING DESIGNERS

Don Chadwick

David Ritch

Sir Norman Foster

John Munford

Emilio Ambasz

ɔiaan VanSeveren

ɔn-Marie Duthilleul

Dorinne Mei Lee

Joseph Ricchio

Justus Kolberg

Laura Noakes

Carlos Tiscar

Will Prindle

Josef Gorcica

Gae Aulenti

Paul Tuttle

Andreas Krob

Wulf Schneider

n-Michel Wilmotte

Osvaldo Borsani

Marcel Breuer

Nanna Ditzel

Enric Miralles



We've got a whole cast of colorful characters.

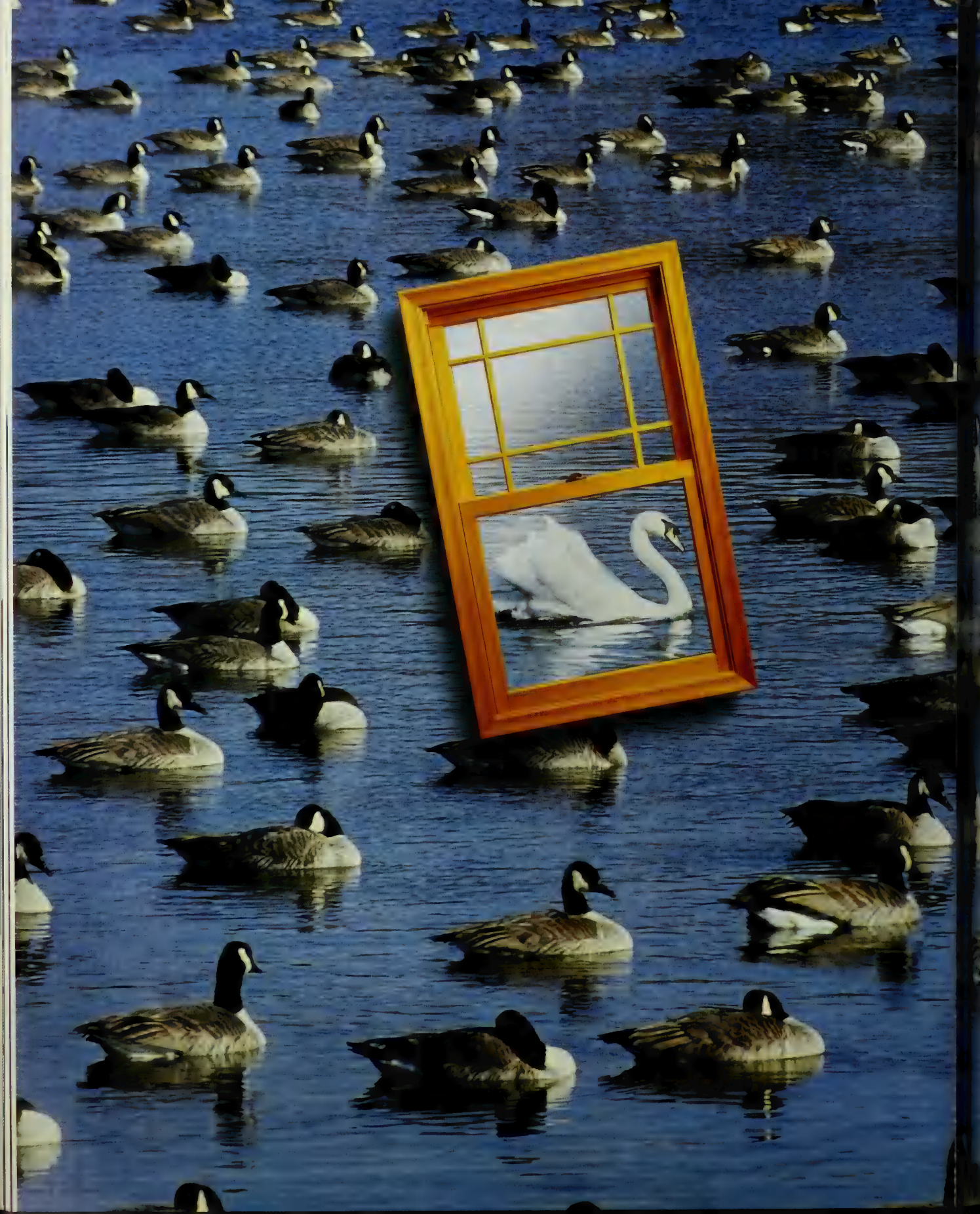


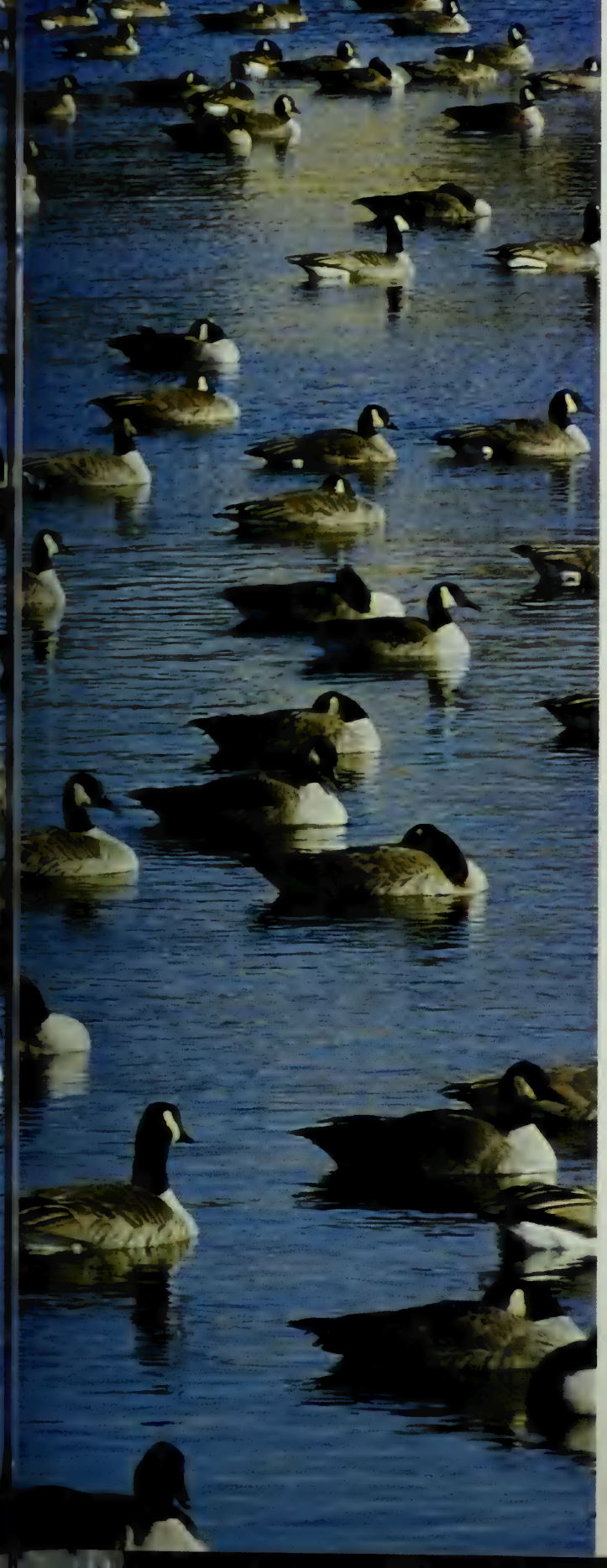
DesignForm+ brings you contract furniture from an all-star lineup of internationally acclaimed designers. The Bantam chair by Don Chadwick and David Ritch is an exuberant blend of inspired design and functional versatility. Stackable, lightweight, comfortable and affordable, it's an all-purpose chair with infinite appeal.

DesignForm+
A FORMS+SURFACES® COMPANY

tel 877.525.5566 fax 805.684.7757 www.forms-surfaces.com

DesignForm+, SiteForm+, LightForm+, Surfaces+, Hardware+ and Cornelius+ are trademarks of Forms and Surfaces Company, LLC





It's not like the rest.

The new Clad Ultimate Double Hung.

No compromises. That was our objective. So we made over 100 design changes. Gave it clean, traditional lines and an all-wood interior. Eliminated unsightly, vinyl jamb liners. Developed an exclusive integrated sash tracking and locking system, for easier opening, closing and cleaning. And wrapped its exterior in extruded aluminum clad with a unique profile that closely matches the character and detail of wood. Presenting the new Clad Ultimate Double Hung. It's one of a kind.



Look closely. No vinyl jamb liner. An all-wood interior. Plus, it tilts easily for cleaning. You get a window that's beautiful inside and out.



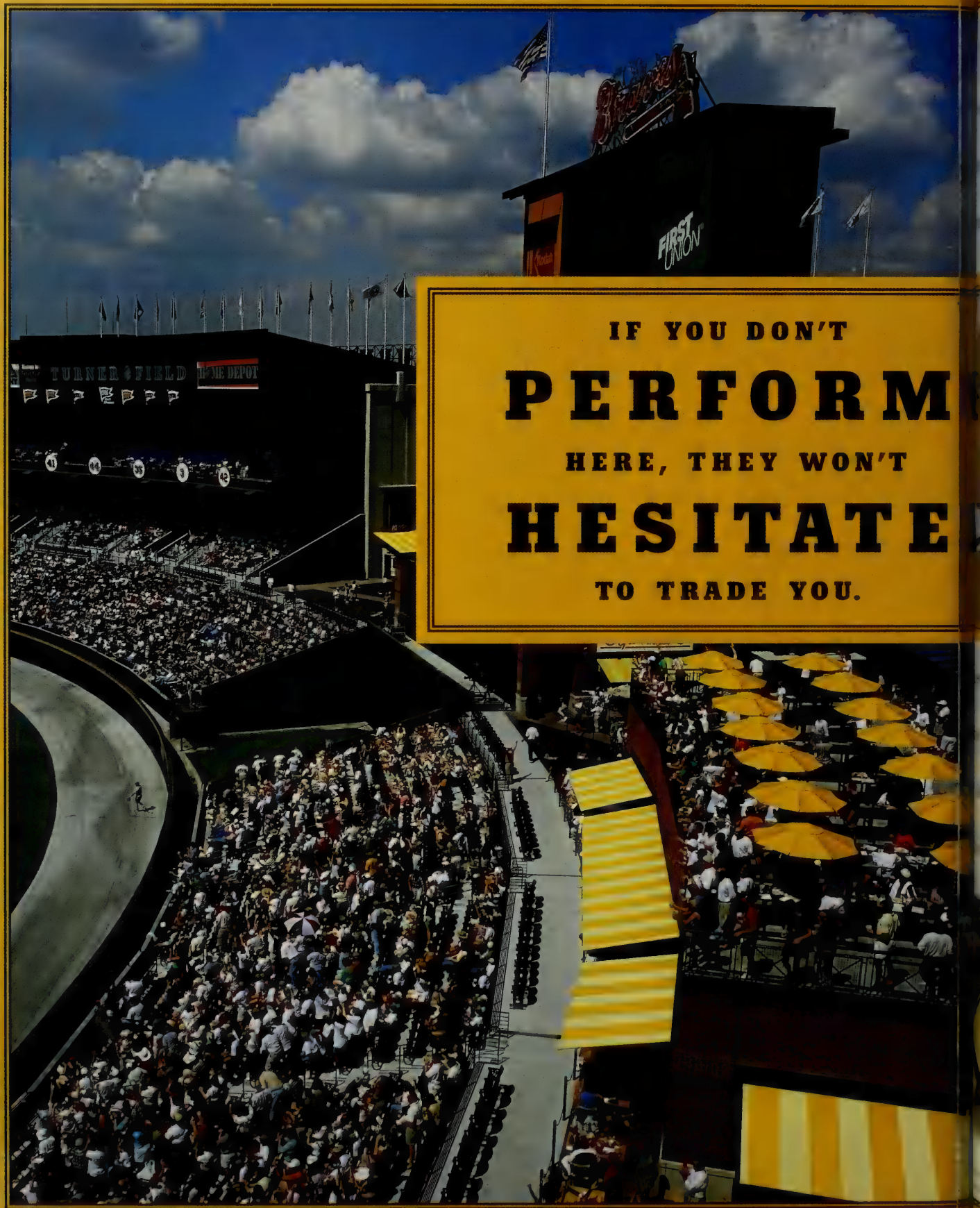
MARVIN
Windows and Doors
Made for you.

For a free product brochure, call 1-800-236-9690.

In Canada, 1-800-263-6161 www.marvin.com

1200009A

CIRCLE 38 ON INQUIRY CARD


TURNER FIELD
HOME DEPOT
FIRST UNION
IF YOU DON'T
PERFORM
HERE, THEY WON'T
HESITATE
TO TRADE YOU.

You've got to be tough to make it in the big leagues. eople expect you to perform night after night, year ter year. That's why Sunbrella® awnings, canopies and arket umbrellas are the perfect choice for any ball park. Our solution-dyed acrylic fabric stands up to sun, wind, rain, and the occasional homer. The color is locked into the fibers. The ues won't fade or wash out, and both sides of the bric stay rich and vibrant.



During the game, Sunbrella keeps the fans in the hop House restaurant cool. Our breathable fabric can block 75% of the sun's heat while reducing a room's temperature 8 to 15 degrees. Laboratory tests also showed that the air underneath a Sunbrella awning was 22% cooler than air under coated awnings.* In fact, Sunbrella can actually reduce air conditioning costs by 25%.







Even the maintenance crew benefits from the easy care Sunbrella offers. Mild, soapy water will wash away most dirt stains. Which gives the crew more time to sweep up millions and millions of peanut shells.

So if you're looking for a fabric that performs under pressure, give Sunbrella a tryout. For the dealer nearest you, check the Yellow Pages under "Awnings and Canopies."



sunbrella®
GLEN RAVEN MILLS, INC.

ased on tests conducted by the National Bureau of Standards (US Commerce Department). Awning installation by Georgia Tent & Awning, Atlanta, GA. The Atlanta Braves and Turner Field e registered trademarks of the Atlanta National League Baseball Club, Inc. ®Sunbrella and are registered trademarks of Glen Raven Mills, Inc. www.sunbrella.com

CIRCLE 39 ON INQUIRY CARD

Fernau & Hartman designs for improvisation at OXYGEN MEDIA

By Clifford A. Pearson

FEATURE

Explaining his design strategy for the offices of Oxygen Media in New York City, Richard Fernau, FAIA, talks of creating opportunities for "controlled accidents," those unplanned meetings and conversations that, in a simpler era, supposedly happened around the water cooler. Instilling the water-cooler spirit throughout the headquarters of a fast-growing start-up company in the cyber age was a key challenge facing Fernau & Hartman Architects. Working within a very tight (though undisclosed) budget and a frantic one-year schedule for design, construction, and move-in, the architects elevated the adjectives rough, cheap, and mobile into virtues.

Oxygen is the women's cable-television channel and online network founded and run by Geraldine Laybourne, who had turned Nickelodeon into a popular fixture in the cable-TV landscape. Partnering with Oprah Winfrey and some top Hollywood producers and funded by people such as Paul Allen, a cofounder of Microsoft, and Bernard Arnault, the chairman of LVMH (the French luxury-goods conglomerate that includes Louis Vuitton and Moët Hennessy), Oxygen is not your typical start-up, floating on youthful dreams. But it *is* a start-up and shares many of the same risks and challenges of any brand-new enterprise.

Laybourne and her husband, Kit, who is an animator and a key executive at Oxygen, "had a vision," says Fernau, "but there were a lot of unknowns about their business when we got started." Aiming to capture the great potential released by the "convergence" of television and the Internet, the Laybournes were charting new territory and targeting a market—women—that had often been taken for granted. Nobody knew how many employees the company would need or how fast the engine would run. So Fernau decided to give Oxygen "an armature for improvisation." "We know we're in a world of change, so we have to be extraordinarily flexible," states Kit Laybourne. "And we know we have to make the place fun, so people—especially young people—will want to work here."

Fernau had a long history of working with the Laybournes, having designed Nickelodeon's offices in New York, the Disney Channel's offices in Burbank, and a house in Colorado for the couple and their



PHOTOGRAPHY: © T. WHITNEY COX, EXCEPT AS NOTED; ANDRE SOUROUJON (TOP ROW)







The 21,000-square-foot top floor (below) has 35-foot ceilings, high enough to fit a small mezzanine at one end. About 500 people work at the headquarters, in a set of old buildings that was once a Nabisco factory.





At the heart of the office is a 50-foot-high atrium (left) anchored by two towers: a wood-clad one with conference rooms on each floor and another finished with cementitious board (opposite). Plush chairs encourage casual chats (below).

children. When the Laybournes started looking for a location for their company, they asked Fernau to help them scout properties. Of all the properties they investigated, the top two floors of Chelsea Market—a collection of 17 old industrial buildings near Manhattan's meatpacking district—had "the most 'oxygen,'" says the architect. "You could walk into that space with its 35-foot ceilings and take a deep breath."



The talking cure

Starting in early 1999, Fernau and his partner, Laura Hartman, ran a series of three-day charettes at their offices in Berkeley, Calif., at which the key players—including the Laybournes—participated. The first charette "was mostly conceptual," recalls Fernau, and dealt with the clients' management style and the new company's visual identity. "They wanted a place with buzz, a place that encouraged a free exchange of ideas."

According to Fernau, much of the discussion "focused on the interstitial spaces, the spaces between the desks where people hang out and talk." By the end of the charette, the clients and designers agreed on creating two kinds of such social areas: a few large ones where people from around the office can gather to talk informally and many smaller ones where coworkers can collaborate on projects.

Instead of traditional workstations, the architects decided to use

TEACHERS AT THE TOP OF THE CLASS



They're a show-biz power couple who move in a charmed circle of Hollywood stars and wealthy businesspeople. Their programs have won Emmys and Peabodys. But they started out as teachers, which may explain why they've been so successful.

Geraldine Laybourne, the chief executive officer and founder of Oxygen Media, and her husband, Kit, the head of the company's animation group, have risen to the top by never looking down at their viewers, a lesson good teachers always learn. Whether developing programs for kids watching Nickelodeon or teenagers glued to MTV, the Laybournes have won over audiences and critics with intelligent shows that also entertain.

Geraldine has the higher profile of the two and is commonly credited with turning a fledgling cable channel called Nickelodeon into a very lucrative piece of Viacom, Inc., then starting Nick at Nite and running MTV. After 16 years at Nickelodeon, she became president of Disney/ABC Cable Networks in 1996. Two years later she left to start Oxygen.

Kit is an acclaimed animator whose credits include *Gullah Gullah Island* and *Eureeka's Castle* for Nickelodeon and *Liquid Television* for MTV. Earlier in his career he founded Noyes & Laybourne, a production company with filmmaker Eli Noyes. *CAP*



Spacecraft
OFFICE SYSTEM

desks worktables bookcases files
credenzas storage mobile pedestals
conference tables workstations

















Create a creative workspace with the Spacecraft Office System. Over 140 pieces constructed of birch FinPly panels and brushed anodized aluminum supports. Please contact us for more information.

SPACECRAFT
1205 Manhattan Avenue
Brooklyn, NY 11222
718.383.9600

CIRCLE 40 ON INQUIRY CARD
www.spacecraftnyc.com



Most employees sit at open workstations along either stained-wood zippers (right) or one of the metal zippers (below). Desks sit on wheels so they can be pushed together.

a kind of theatrical scaffolding that would serve as both furniture and storage system and could be easily reconfigured to accommodate changing needs. "We called it a 'double mother,' because it would be a complete support system on both a technological and a social level," explains Fernau. Shortly after the first charette, the architect brought his car into the repair shop to get a tire fixed and noticed the metal shelving system for holding tires. A lightbulb went on in his head. "I asked myself, 'What if you could inhabit an industrial pallet-rack system?'"

Marrying the double mother with the tire racks, the designers developed what became a key element in the Oxygen offices—the "zipper." An adaptation of an industrial shelving system made by the Equipto Company, the zipper would be a spine of workstations with attitude. Desks would roll on in-line-skate wheels so they could be huddled together or pulled apart. Storage "suitcases" would slide along the upper portion of the metal framework. Acoustical "gull wings" painted like colorful checkerboards would flap out from the spine for privacy. Task lights would swivel on metal arms. The modular assembly of attached workstations would make it easy to add, subtract, and adapt individual pieces.

"We were moving really fast. Even before they signed a lease at Chelsea Market, we were designing the zipper," says Fernau.

Equipto, which had always targeted the industrial-building market, was thrilled at the chance to work on an office interior and perhaps find a new source of customers, recalls Alison Murphy, the director of facilities for Oxygen. Meanwhile, the designers kept adding more elements to the zipper: open cable trays, nesting file cabinets, and perforated-metal "butterfly-wing" partitions—not all of which made it into the final design.

The second charette investigated a variety of schemes for laying out the offices. Although the Laybournes preferred open spaces with workstations—to encourage "schmoozing" and discourage corporate hierarchy—they agreed to have some private offices. They also decided to carve out an atrium with an open stair connecting Oxygen's two main floors (the building's 7th and 8th), giving up some valuable square footage to create an attention-grabbing central volume rising nearly 50 feet up. Two "towers" would anchor the atrium: one with conference rooms on each floor and the other with editing and production spaces. The participants at the charette debated whether the main entry should be on the 7th or the 8th





THERE'S PLEASURE IN THE PAIN.

You're up for the challenge. Making sure product specs don't compromise the design vision. Knowing that it's got to be done on time, on budget and meet some very stringent performance requirements. You work with an audience always peering over your shoulder. Sweating the details, striving to please all of the people all of the time. That's what Symmes Maini & McKee Associates managed to do when they specified the coatings and bold color scheme for Nortel Networks.



SHERWIN-WILLIAMS ADVENTURE IN EXCELLENCE YEAR 2000 WINNER

Interior Design Firm **Symmes Maini & McKee Associates** / *Location* **Nortel Networks** / *Paint Colors* **Bromley Blue SW1502, Aztec Orange SW1636, Yellow Warbler SW1670, Mixed Berries SW1559, Designer White SW1904, Prussian Plum SW1258, Purple Rubiate SW1259**

The paints. The possibilities.

CIRCLE 41 ON INQUIRY CARD

Call our Architect & Designer Answerline at **1-800-321-8194** for color and product information on your next project.

[www.sherwin-williams.com]





Checkerboard "gull-wings" can be added to zippers for acoustical privacy (right). Wooden shelving units called "suitcases" provide space for personal items (bottom).

floor, and finally agreed on the lower one. "We decided to bring people in on the lower level and move them up to the light and the big space," recalls Fernau, referring to daylight coming from the upper level's clerestory windows.

Because Oxygen focuses on women, not children, the designers developed a palette of colors and materials that would be lively but less frenetic than the one Fernau & Hartman used at the Nickelodeon offices years before. "They wanted a calmer kind of jazz with just punches of color," says Fernau. Playing off the image of fresh air, the architects selected natural materials such as wood cladding for the conference tower and colors such as celery, mint, and mustard for wall surfaces.

Mixing it up in the office

In laying out the office, the Laybournes wanted to apply the same workplace philosophy they had used at their Nickelodeon offices: employees working in teams and a grassroots (rather than top-down) decision-making process. "Originally, we thought we'd have all the managers sit with their teams," explains Kit Laybourne. "But eventually we decided to mix things up a bit more and put people from different teams together." In particular, the Laybournes realized it was important to mix television people with Internet people, so there could be cross-pollination between the two media. Encouraging teamwork was another goal. The movable desks along the zippers and the spaces between "broken" zippers provide venues for casual interaction between employees. Groups of comfy chairs and coffee tables in various open areas let people exchange ideas a bit further from their desks, as does the office canteen.

To balance the industrial aesthetic of the Equipto zippers, the architects designed a lower, less imposing version in mustard-yellow-



WILL THE REAL 100% RUBBER COVE BASE PLEASE RAISE YOUR HAND.



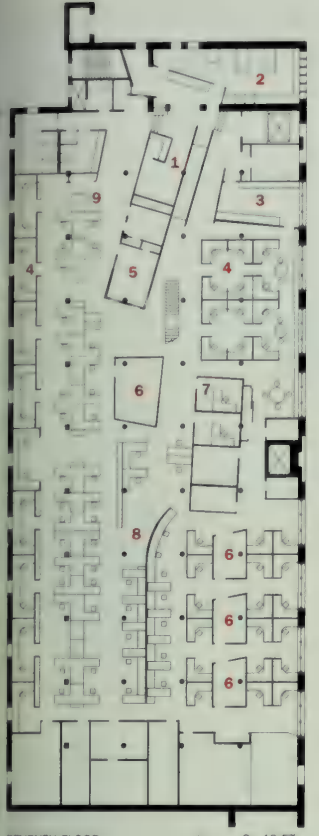
Roppe Corporation 1602 N. Union Street, Box 1158 Fostoria, Ohio 44830-1158 USA
800-537-9527 / 419-435-8546 Fax: 419-435-1056 internet: www.roppe.com
e-mail: sales@roppe.com For free samples call toll free 1-877-SAMPLE-4

Roppe

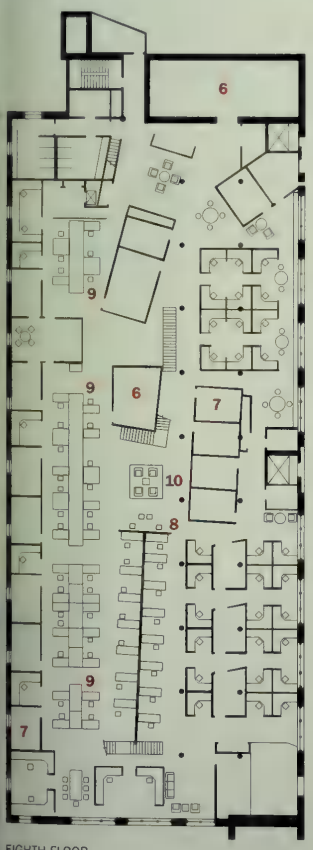
Some "rubber" base products are up to 97% vinyl. But Roppe real Rubber Wall Base (type TS) is 100% vulcanized rubber. It won't shrink and doesn't need to be acclimated to building conditions prior to installation. So you can use it with confidence.

Rely on Roppe rubber base for years of worry-free wear. Because nothing performs like rubber. And nobody knows rubber like Roppe.

CIRCLE 42 ON INQUIRY CARD



Chelsea Market (right) has stores and food stalls on the ground floor with offices above. Oxygen cut through one floor to create an internal atrium and connect its two main floors (left).



1. *Reception*
2. *Canteen*
3. *Mail*
4. *Open office*
5. *Editing*
6. *Conference*
7. *Private office*
8. *Wooden zipper*
9. *Metal zipper*
10. *Television studio*



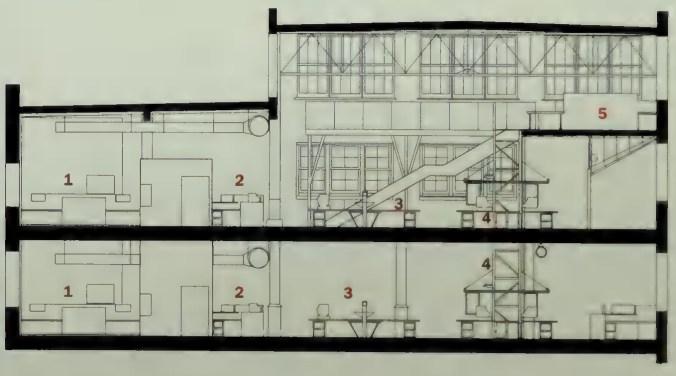
stained wood. "We tried to create an environment with visual alternatives, to create a sense of variety," explains Fernau.

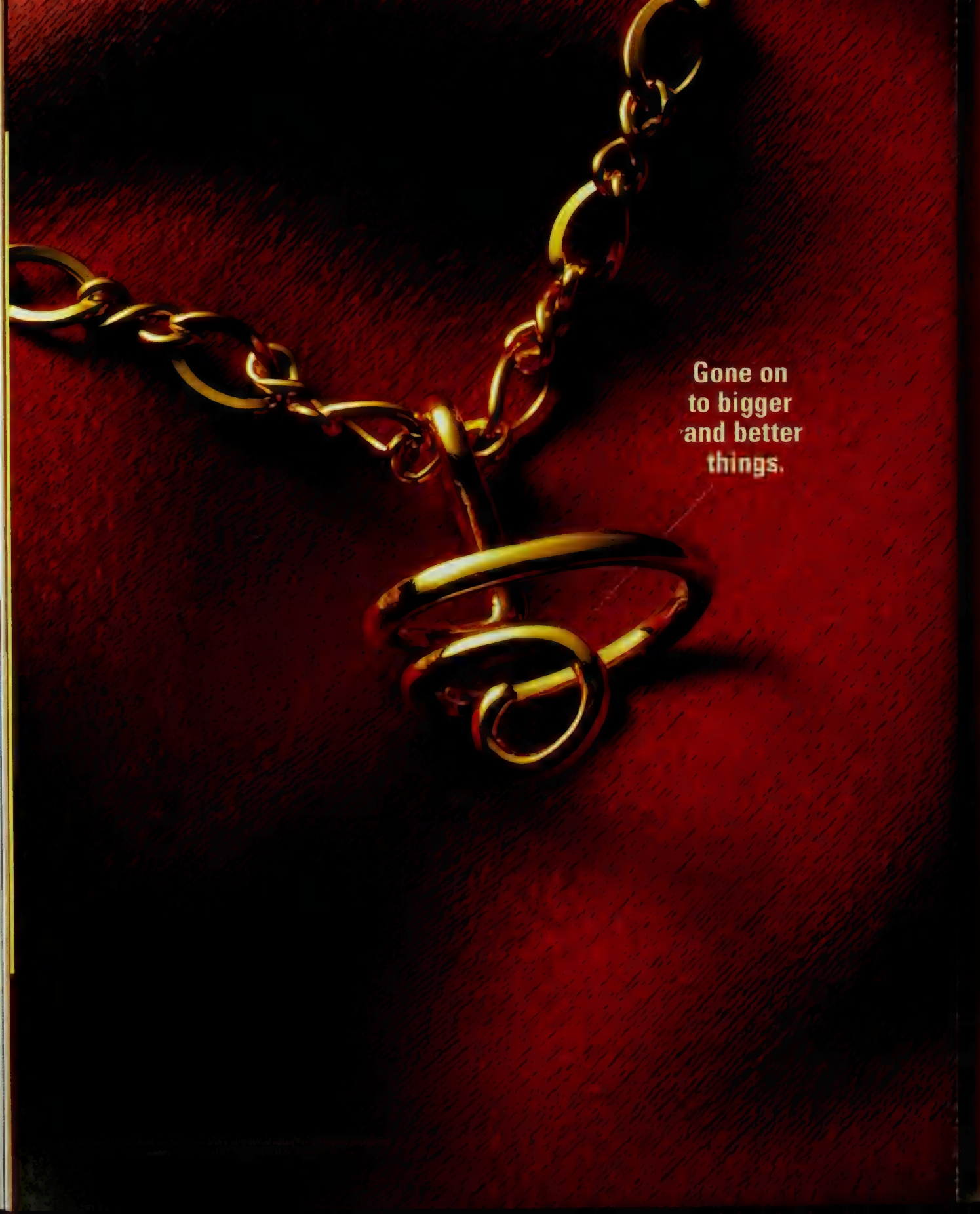
As Oxygen moved into its new offices in October 1999, the architects were still accommodating changes. Growing faster than it had expected, the company rented space on the 6th floor that was already fitted out by a previous tenant and soon thereafter rented raw space on the 3rd floor, which it is now finishing with an updated version of Fernau's designs. The most visible last-minute change, though, was inserting an open studio for shooting the company's television show *Pure Oxygen* right in the middle of the office on the 8th floor. With zippers and offices on three sides of the studio, the stylish bustle of the work setting is now the backdrop for the channel's signature series. "Andy Warhol would love this place; everybody gets his 15 seconds here," states Michel Fiechter, a principal at the Phillips Group, which worked as the local architect.



Eight months after move-in, the offices hum with activity. Few employees move their desks or shelves along the zippers once they've settled in. But the zippers act as social magnets, with workers sharing information and trading observations—just as the architects had hoped. And the 20-somethings who work here seem to be energized by the place. "It's an idea factory," says Fernau of the Oxygen offices, "lots of bodies in motion, not many people sitting still." ■

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**




Gone on
to bigger
and better
things.

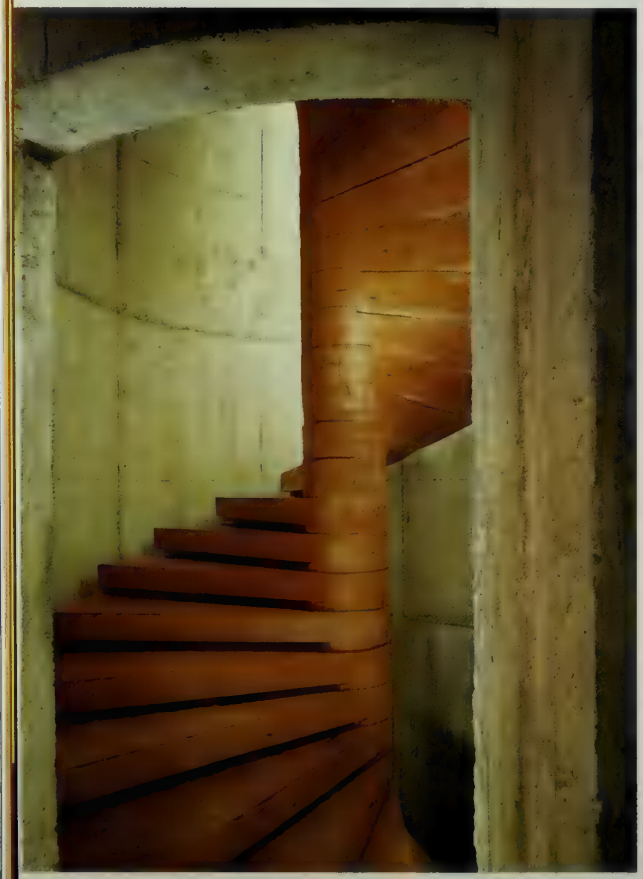
In jewelry, it glows. In a surface, it dazzles. It's quartz crystal. Now the heart of an amazing new material. See for yourself at www.zodiaq.com.



ZODIAQ™
QUARTZ SURFACES
DUPONT

CIRCLE 43 ON INQUIRY CARD



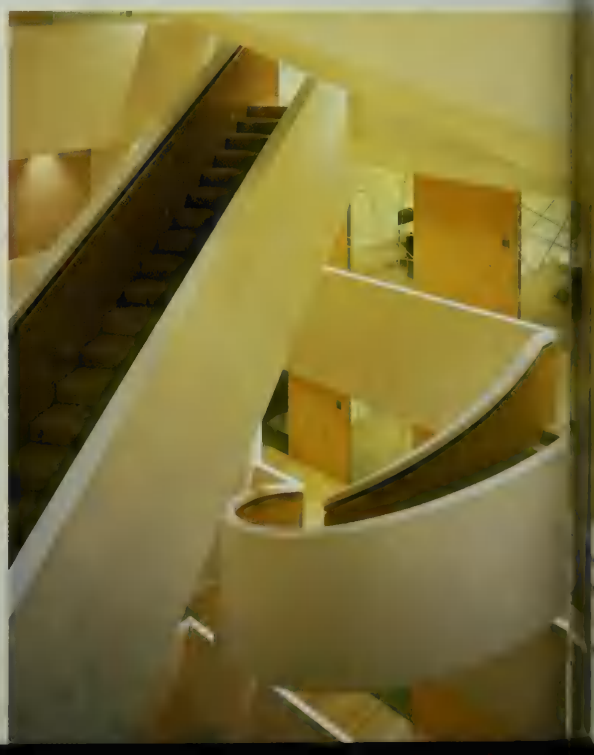


Project: *Errázuriz House, Lake Villarrica, Chile*
Architect: *Christian de Groote*
Photographers: *Guy Wenborne (top); Luis Poirot (above)*

By Sarah Amelar

Ascending gently or steeply, spiraling like coiled springs or rising like craggy peaks, stairs can provide moments of exceptional architectural drama or beauty. Probably not by chance, some of film's most memorable scenes involve stairways—consider Gone with the Wind *or Fellini's 8½. Throughout history, great stairs—transitions fully engaging both the X and Y axes—abound: at Macchu Picchu, Michaelangelo's Laurentian Library, Charles Garnier's Paris Opera, the Spanish Steps of Rome, the amphitheaters of ancient Greece, the Villa Malaparte in Capri, and the Mayan pyramids of Mexico, to name just a few. Artists from Piranesi to Duschamp have been inspired by stairs. Here, in* RECORD INTERIORS *2000, we offer a recent portfolio of extraordinary interior stairs, caught by architectural photographers in the crosshairs of their fine-tuned lenses.*

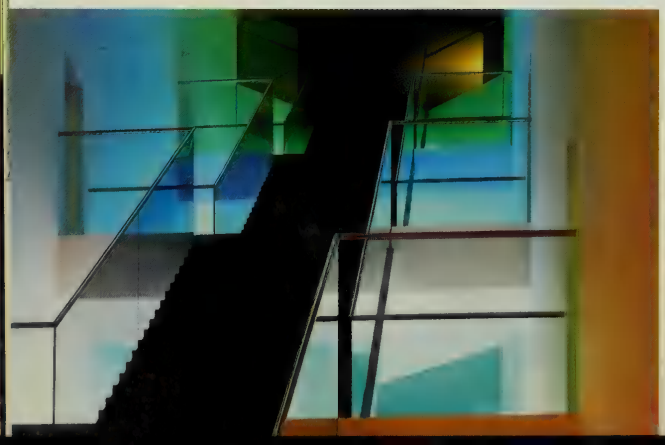
The Beckoning Staircase





ect: *Ericsson Offices, London*
itect: *Wingardh Sandell Sandberg*
Allies & Morrison
tographer: *Dennis Gilbert/VIEW*



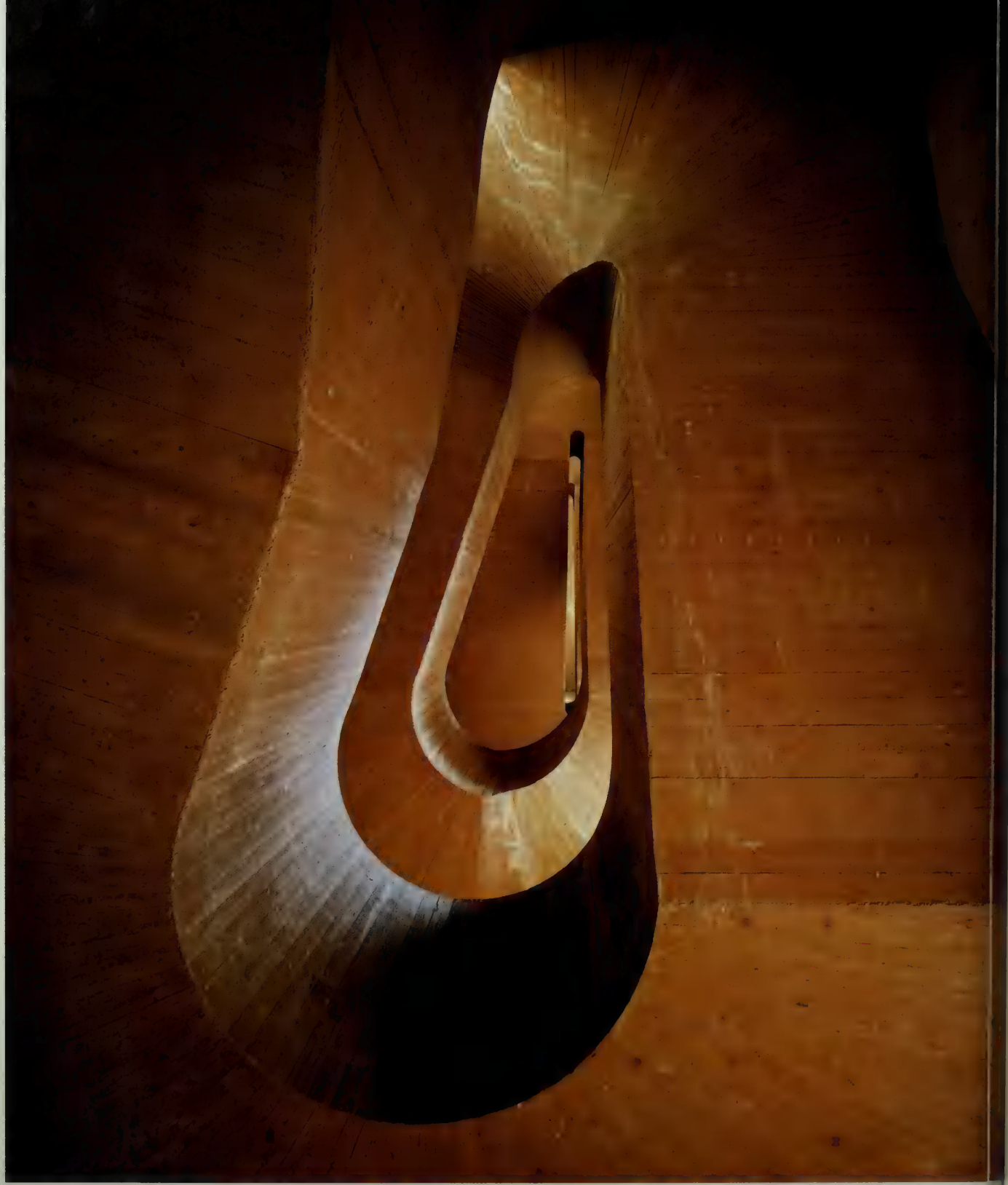


Project: *Administration Building, Munich*
Architect: *Betz Architekten*
Artist: *Dan Flavin (lighting installation)*
Photographer: *Pascal Hoffmann (left); Jens Weber (above)*



Project: *New Museum, Nuremberg, Germany*
Architect: *Volker Staab*
Photographer: *Udo Meinel*



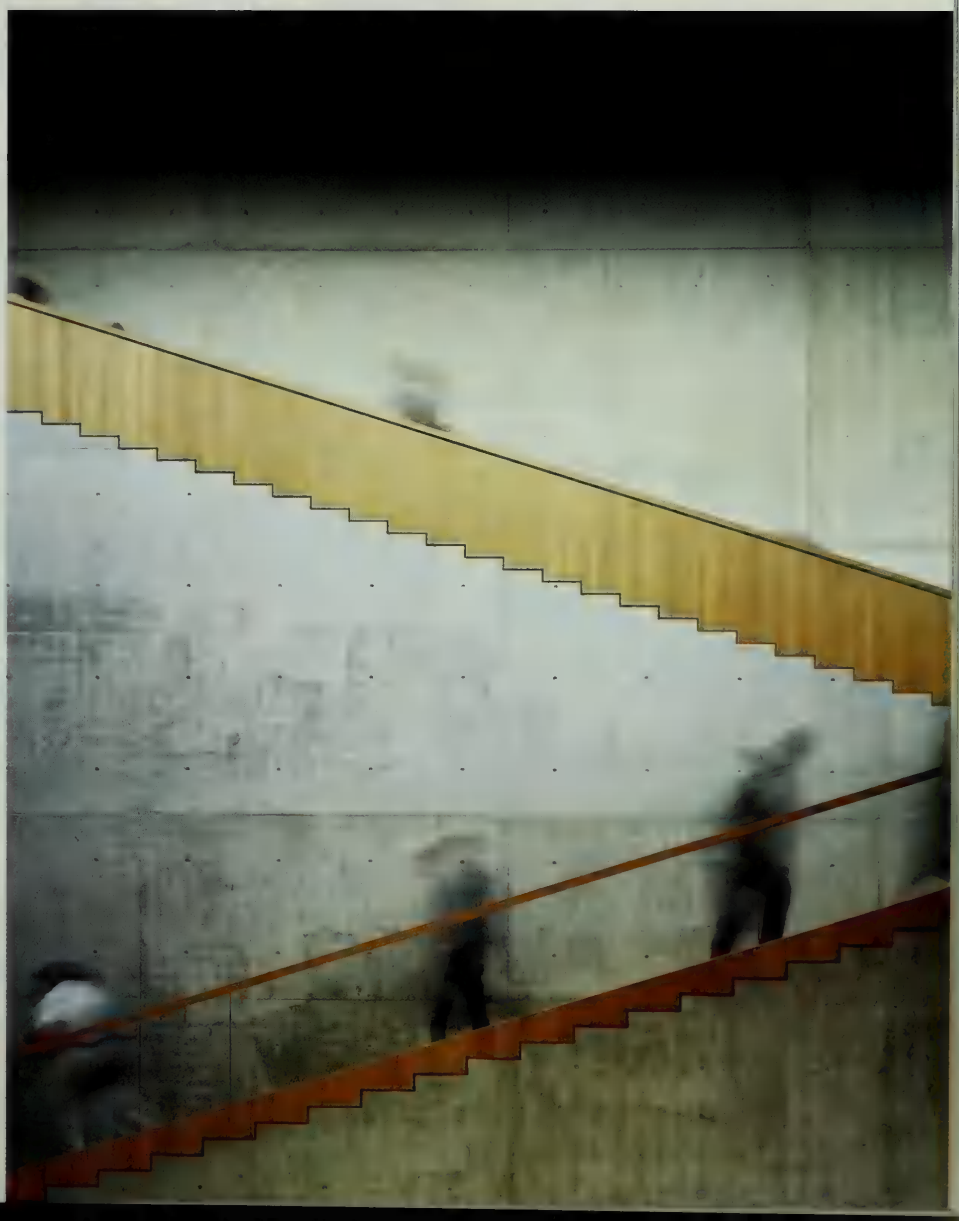


Project: *Museum of Art, Duisburg, Germany*
Architect: *Herzog & de Meuron*
Photographer: *Christian Richters*



Project: *Paris Apartment*
Architect: *Drole de Trame*
Photographer: *Luc Boegly/Archipress*

Project: *Georg-Schäfer Museum, Schweinfurt, Germany*
Architect: *Volker Staab*
Photographer: *Udo Meinel*





Project: *Köln Arena, Cologne, Germany*
Architect: *Peter Böhm*
Photographer: *Lukas Roth*



Project: *Duke University Medical Sciences Research Building Durham, N.C.*
Architect: *Payette Associates*
Photographer: *Brian Vanden Brink*





LIMITED *FLOORING*

CHOICES

CAN MAKE YOUR DESIGN

FALL FLAT

ON ITS FACE.

How can you take your design to the next step if you're confined to one company's limited choices? To see a concept through to completion requires a contractor who isn't restricted by manufacturer alliances and who has the selection and experience to fulfill your design. That combination perfectly describes your local, independent StarNet flooring contractor. Independent means an unrestricted selection of products. Local means a single contractor who's on site and personally committed to meeting your needs and deadlines. So if you want to rise to the occasion without stumbling, we'll be there for you every step of the way. To reach your local StarNet member call 1-800-787-6381.

STARNET

INDEPENDENT FLOORING COOPERATIVE

www.starnetflooring.com

1-800-787-6381

Alabama

Terry Fry Flooring
Birmingham, (205) 870-4334

Arizona

Sun Country Floors, Inc.
Mesa, (480) 497-5011
Wholesale Floors
Phoenix, (602) 248-7878

California

B.T. Mancini Co., Inc.
Milpitas, (408) 942-7900
Sacramento, (916) 381-3660
Cinderella Showcase
Salinas, (831) 757-1950
San Luis Obispo, (805) 544-0324
Floorcovering Consultants Grp.
Culver City, (310) 559-2588
Oceanside, (760) 758-4188
Harry L. Murphy, Inc.
San Jose, (408) 955-1100
Hoem-Schurba & Associates
S. San Francisco, (650) 871-5194
Howard's Rug Co. of San Diego
San Diego, (858) 558-3939
Majestic Floors, Inc.
Concord, (925) 825-0771
Universal Flooring Systems, Inc.
Huntington Beach, (714) 373-1136
Wallach's Commercial Flooring
Irvine, (949) 859-1009

Colorado

Bonitz Flooring Group, Inc.
Colorado Springs, (719) 593-2220
Evans & Company, Inc.
Denver, (303) 573-4928

Connecticut

BKM Floorcovering
East Hartford, (860) 528-9981
Milford, (203) 874-7754
Stamford, (203) 324-3188
Commercial Flooring Concepts, Inc.
Windsor, (860) 683-0673
R.D. Weis & Companies.
S. Windsor, (860)528-9637

Delaware

Pala Tile & Carpet Contractors
Elsmere, (302) 652-4500

Florida

Dixie Contract Carpet, Inc.
Jacksonville, (904) 296-0023
Jones Floor Covering, Inc.
Pensacola, (850) 476-1995
Spraggins Contract Intfriors
Orlando, (407) 295-4150

Georgia

Bonitz Flooring Group, Inc.
Atlanta, (770) 952-4093
Southeastern Comm. Flrg., Inc.
Woodstock, (770) 591-9980

Hawaii

Island Flooring Co., Inc.
Honolulu, (808) 847-6577

Idaho

Wall 2 Wall Commercial Flrg.
Boise, (208) 376-0136
Idaho Falls, (208) 523-5490
Sun Valley, (208) 726-0791
Pocatello, (208) 232-4226

Illinois

Commercial Carpet Consultants
Des Plaines, (847) 298-9570
Mt. Prospect, (847) 640-8060
Mr. David's Carpet Service, Ltd.
Carol Stream, (630) 260-9400

Indiana

Certified Floorcovering Sys.
Indianapolis, (317) 872-7926
Interior Finishes, Inc.
Osceola, (219) 674-9975
Strahm Group, Inc.
Fort Wayne, (219) 489-2537

Iowa

Commercial Flooring Company
Dubuque, (319) 582-4976

Kansas

Artistic Floorcovering, Inc.
Lenexa, (913) 317-8623
CAP Carpet, Inc.
Topeka, (785) 273-1402
Wichita, (316) 262-3491
Interior Surface Company, Inc.
Olathe, (913) 397-8100

Louisiana

Craft-Croswell Contract
Harahan, (504) 734-1519
Royerri Commercial Carpets
Metairie, (504) 833-6331

Maine

Paul G. White Tile Co., Inc.
Portland, (207) 797-4657

Maryland

Apartment & Business Flrg. Sys.
Baltimore, (410) 485-6790
Carpet Fair, Inc.
Baltimore, (410) 265-6633
CB Flooring
Columbia, (410) 381-5400
Frederick, (301) 662-6168
Suburban Floorcoverings
Landover, (301) 773-1600

Massachusetts

Allegheny Contract Flooring, Inc.
Woburn, (781) 935-1077
Business Interiors Flrcvg., Inc.
Woburn, (781) 938-9994
Mousseau Contract Flooring
So. Attleboro, (508) 761-8870
R.D. Weis & Co., Inc.
Allston, (617) 787-1009

Michigan

Central Tile & Terrazzo Co., Inc.
Kalamazoo, (616) 375-1660
Floor Craft Floor Covering, Inc.
Clinton Township, (810) 468-9900

Minnesota

Multiple Concepts Interiors
Brooklyn Park, (612) 537-5006
Waite Park, (320) 253-5078
St. Paul Linoleum & Carpet Co.
Eagan, (651) 686-7770

Mississippi

Craft-Croswell Contract
Hattiesburg, (601) 296-1827
Ridgeland, (601) 856-8861

Missouri

Wm. J. Zickel Co., Inc.
Fenton, (636) 343-8663
Kansas City, (816) 471-5100
Springfield, (417) 831-3521

Montana

Pierce Flooring & Design Ctr.
Billings, (406) 652-4666
Bozeman, (406) 587-5428
Butte, (406) 494-3313
Great Falls, (406) 727-3832
Missoula, (406) 543-8224

Nebraska

Commercial Flooring Systems, Inc.
Omaha, (402) 592-4383

New Hampshire

A&E Flooring, Inc.
Hookset, (603) 625-1266
Merrimac Tile Co., Inc
Derry, (603) 432-2544
Paul G. White Tile Co., Inc.
New Market, (603) 659-3223

Nevada

B.T. Mancini Co., Inc.
Sparks, (775) 359-3007

New Jersey

Flooring Technologies, Inc.
Whippany, (973) 386-1600
The Gillespie Group, Inc.
North Brunswick, (732) 940-7777
Independent Comm. Flrg. Sys., Inc.
Englewood, (201) 894-0044
M.E. Sabosik Associates, Inc.
Pt. Pleasant, (732) 892-2800
Metropolitan Contract Carpets
Cherry Hill, (856) 795-1177

New Mexico

Business Environments
Albuquerque, (505) 888-4400

New York

Associated/ACC International Ltd.
New York City, (212) 633-0250
Commercial Floors Beautiful
White Plains, (914) 949-1400
CTS Flooring
New York City, (212) 953-5133
Fraser/Gold Carpet Corp.
New York City, (212) 751-3455
Lane's Floor Coverings & Interiors
New York City, (212) 532-5200
National Flooring Systems
Great Neck, (516) 498-9622
New York Carpet Corp.
New York City, (212) 736-1132
R.D. Weis Companies
Port Chester, (914) 937-9337
Victor, (716) 924-0320
The Sposato Companies
Liverpool, (315) 422-1489

North Carolina

Bonitz Flooring Group, Inc.
Charlotte, (704) 598-0094
Fayetteville, (910) 223-0025
Greensboro, (336) 996-9900
Raleigh, (919) 380-0084
Burton Floorcovering, Inc.
Pineville, (704) 583-0005
E.E. Wilson Floor Covering, Inc.
Lexington, (336) 357-5555

Ohio

OCP Contractors, Inc.
Holland, (419) 865-7168

Oregon

Fashion Floors
Medford, (541) 779-0996
Rubenstein's Contract Carpet
Eugene, (541) 484-1101
Portland, (503) 224-1007

Pennsylvania

CTS Flooring
Limerick, (610) 489-6270
Facility Services Group, Inc.
Conshohocken, (610) 940-4370
Owen M. Bastian, Inc.
Allentown, (610) 798-9910
Trexlertown, (610) 798-9910
Wescosville, (610) 798-9910
Sliwinski Flrcvg Group, Inc.
Huntingdon Valley, (215) 364-9661

Rhode Island

Ruggieri Flooring, Inc.
Cranston, (401) 942-1700

South Carolina

Bonitz Flooring Group, Inc.
Charleston, (843) 556-2840
Columbia, (803) 799-0181
Greenville, (864) 288-3771
N. Augusta, (803) 279-6411

Tennessee

Bonitz Flooring Group, Inc.
Chattanooga, (423) 697-9456
Knoxville, (865) 588-3630

Texas

Corporate Care, Inc.
Houston, (713) 692-6300
Flooring Associates
Fort Worth, (817) 332-6977
Intertech Flooring
Austin, (512) 385-4574
San Antonio, (210) 650-9670
RWA Flooring Solutions
Bedford, (817) 858-6634
San Antonio Floor Finisher's, Inc.
San Antonio, (210) 341-7101
Texan Floor Service, Ltd.
Fort Worth, (817) 923-1759
Houston, (713) 956-9966
Vector Concepts, Inc.
Irving, (972) 399-1303
Fort Worth, (817) 595-7439

Utah

Wall 2 Wall Commercial Flrg.
Ogden, (801) 621-2733
Salt Lake City, (801) 288-2794

Virginia

Commercial Carpets of America
Alexandria, (703) 370-0000
Prestige Floors, Inc.
Virginia Beach, (757) 468-5600
Walker's Carpets & Interiors, Inc.
Glen Allen, (804) 262-3636

Washington

Evergreen Commercial Flooring
Bellevue, (425) 883-8680
Rubenstein's Contract Carpet
Olympia, (360) 753-9156
Seattle, (206) 762-5610
Spokane, (509) 328-7220

Wisconsin

Sergenian's Floor Coverings
Beaver Dam, (920) 887-7611
Madison, (608) 273-6300

StarNet

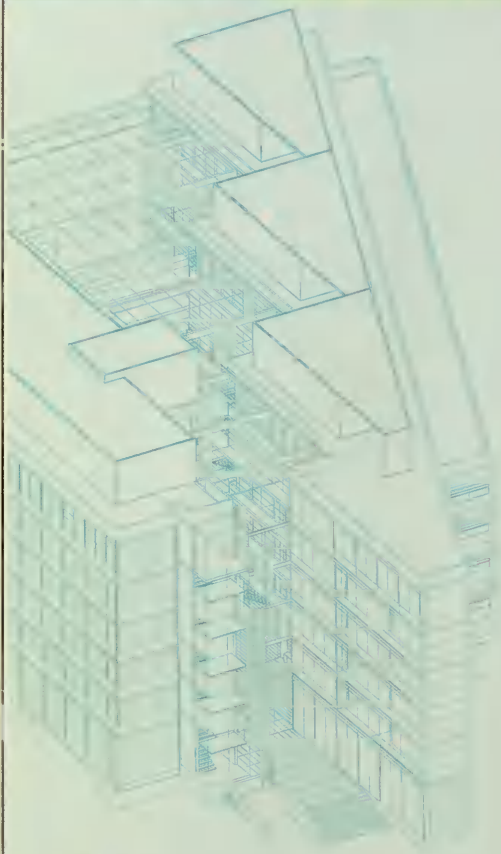
INDEPENDENT FLOORING COOPERATIVE

www.starnetflooring.com

1-800-787-6381

CIRCLE 44 ON INQUIRY CARD

"GOOD DESIGN IS GOOD BUSINESS"



DESIGN STRATEGIES FOR THE NEW ECONOMY

A Conference Presented by

Business Week/Architectural Record

and The National Building Museum

in association with The American Institute of Architects

November 17, 2000

National Building Museum

Washington, DC

Join us for:

- A half-day conference bringing together key business leaders and architects discussing successful collaborations between architects and clients that result in the achievement of business goals.
- A showcase of the award-winning projects and a presentation honoring the recipients of the fourth annual Business Week/Architectural Record Awards.
- A special reception, immediately following the conference from 6 to 8 pm, for the opening of the National Building Museum's major new exhibition, "On the Job: Design and the American Office"

Sponsors:

BENTLEY *Engineering the future together*

MILLIKEN

HermanMiller

THE AMERICAN INSTITUTE OF ARCHITECTS

ARCHITECTURAL RECORD
McGraw Hill Construction Information Group

BusinessWeek

NATIONAL BUILDING MUSEUM

CONFERENCE REGISTRATION FORM

To register, fill in and fax this form to: National Building Museum, 202-376-3564. Or access the registration form on www.architecturalrecord.com or on www.nbm.org. Registrations may also be mailed to: Good Design Conference, National Building Museum, 401 F Street, NW, Washington, DC 20001.

For further information or to register by phone, call 202-272-2448.

Registration fee: $55; $50 for members of the Museum and The AIA.

Please register me for "**GOOD DESIGN IS GOOD BUSINESS**" Conference. For multiple registrations, complete a separate form for each registrant.

Name _____ Title _____

Company _____

Address _____ City/State/Zip _____

Phone _____ Fax _____ E-mail _____

Form of Payment: [] AMEX [] MasterCard [] Discover Card [] VISA

Card Number _____ Expiration Date _____

Cardholder's Name (as it appears on the card) _____

Cardholder's Signature _____

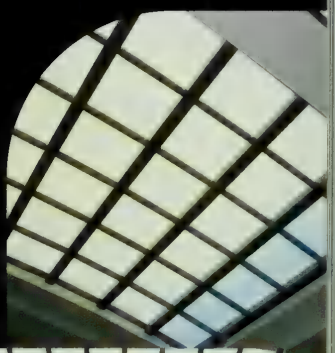
ARCHITECTURAL RECORD
McGraw Hill Construction Information Group

A Division of The McGraw-Hill Companies

MM SYSTEMS

guaranteed to never leak

...ever.



HOW can MM guarantee that these stunning skylights at the Mall of Georgia will never leak ...ever? Look again. These "skylights" are actually MM's Variable Beam Grid ceiling system posing as monumental skylights—minus the expense, maintenance and inevitable leaks. *Surprised?*

Project architects took advantage of VBG Series' inherent flexibility by calling for varying beam sizes, recessed cross-members and a barrel-vault effect. Don't forget the factory applied Kynar 500®/Hylar 5000® finish in a custom color.

Finally, to complete the illusion, white and blue cold cathode lights were hidden inside the larger beams. Through time-elapsed sequencing, the lights transform a nearly invisible gypsum ceiling into a sunrise, twilight or cloud dotted midday sky. VBG Series Ceiling Grids—even the sky is not the limit.



For a complete brochure on Series VBG custom ceiling grids and other interior specialties, call or write: MM Systems Corporation, 4520 Elmdale Drive, Tucker, GA 30084, (800) 241-3460.

Photo Credits: Mall of Georgia;
Architect: Thompson Ventulett Stainback and Associates;
Contractor: Mulkey Enterprises

MM
MM SYSTEMS
Forging the products of your imagination

Kynar 500® is a registered trademark of Elf Atochem North America, Inc. / Hylar 5000® is a registered trademark of Ausimont USA, Inc.

CIRCLE 45 ON INQUIRY CARD



YOUNGTSE™
"TAKYU IV"
SHOWN IN RED.
ALSO AVAILABLE IN
BLUE OR TOBACCO.
STANDARD SIZES
4' X 6' TO 10' X 14'.



YOUNGTSE™
"METOK DHUMRA"
SHOWN IN AMBER.
ALSO AVAILABLE IN
IVORY, HONEY, OR
BLUE. STANDARD
SIZES 4' X 6' TO
12' X 16'.



YOUNGTSE™
"CABANA"
SHOWN IN BRONZE.
ALSO AVAILABLE IN
BLUE, SAGE, OR
OYSTER. STANDARD
SIZES 4' X 6' TO
10' X 14'



YOUNGTSE™
"PLAIN"
SHOWN IN RED.
ALSO AVAILABLE
IN INDIGO, SAFFRON,
TOBACCO, AUBERGINE
OR GREEN. STANDARD
SIZES 8' X 10' TO
12' X 16'.

©1999 ODEGARD, INC.

YOU CAN SEE THEM IN OUR SHOWROOMS. OR AT THE GETTY.

THE GETTY MUSEUM. RESTAURANT DANIEL. ODEGARD IS NOW DOING SOME OF THE MOST EXCLUSIVE INTERIORS IN AMERICA. IF YOU ARE TOO, PERHAPS WE SHOULD TALK.

ODEGARD®

Rare & Original Carpets

THE NEW YORK DESIGN CENTER 200 LEXINGTON AVENUE SUITE 1206 PHONE 212 545-0069 FAX 212 545-0298
THE WASHINGTON DESIGN CENTER 300 D STREET SW SPACE 519 PHONE 202 484-5888 FAX 202 484-6077
THE CHICAGO MERCHANDISE MART 200 WORLD TRADE CENTER SPACE 1828 PHONE 312 644-9638 FAX 312 644-9639
AT ERWIN GROND GMBH FREILAGERSTRASSE 47 BLOCK 1
KABINE 337 8043 ZURICH PHONE + 41-1-700 42 71 FAX + 41-1-700 42 70 EMAIL GROND@FREESURF.CH

CIRCLE 46 ON INQUIRY CARD

RUGMARK

©2000 Odegard, Inc. The designs in this advertisement are copyrighted by Odegard, Inc. and are protected by the copyright laws of the United States and international copyright conventions. Member, Foundation for Design Integrity

Record Interiors 2000

Highly experiential, otherworldly interiors have proliferated around the year zero. Conceptually far from the cheap and literal tricks of theme parks, these places immerse the occupant's senses—sometimes altering perception—through spatial complexity and the quality of light. Fittingly, this phenomenon, in varied guises, recurs often in RECORD INTERIORS 2000.

Just steps from Las Vegas' "Venetian Grand Canal," for example, Lutece restaurant, designed by Morphosis, comments obliquely on its milieu with an off-center, drumlike dining room, whose forms nearly spin like an inverted roulette wheel gone askew. The effect is seductive, yet treacherous, yielding an elegant room that is comfortable, but not quite. By contrast, at Tsunami, Morphosis' other Venetian Resort restaurant, great folded planes of tilting floors and ceilings generate a powerfully engulfing chasm.

In Paris, an interior terrain has surged within the gridded 3-D matrix of the Pompidou Center. For the top-floor restaurant, Georges, architect Jakob+MacFarlane inserted an extraordinary silvery landscape of undulant, cloudlike forms.

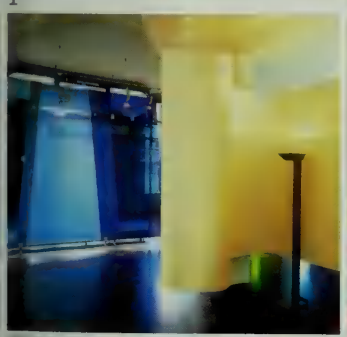
Meanwhile, in Berlin, Sauerbruch Hutton's lighting showroom challenges the conventions of product display by harnessing form with light and color. The setting transforms itself as electric light or the sun's rays pass through transparent mosaics of color. Sculpting with light and reflection is equally poetic, but more Minimalist, at Archi-Tectonics' Duggal digital facility in New York City, where the architecture itself often emits or modulates light. Evoking the virtual realm, Duggal's illumination sometimes implies the presence of volumes, which are, in reality, as intangible as the ether of cyberspace.

Luminous translucency is almost ubiquitous in the realm of recent interiors, especially in the spate of workspaces for dot.coms and related companies [see story on Oxygen Media, page 82] that require flexibility and a fine balance between openness and privacy. Shadowy, veiling materials—sandblasted glass or polycarbonate sheeting—gently diffuse light, creating lantern effects and altering depth perception. In a SoHo loft by Marble Fairbanks, such "lenses" induce provocative ambiguities between indoors and out. North, an Oklahoma City guest suite by Elliott + Associates, carries pure whiteness and translucency to the nth degree, offering a serene retreat and filter to the outside world.

In its own way, each of these RECORD interiors recognizes where it is—none feigns exoticism or borrows ready-made styles—yet in potent architectural terms, they all transport us. ■

The firms featured are:

1. Sauerbruch Hutton Architects
2. Elliott+Associates
3. Archi-Tectonics
4. Jakob+MacFarlane
5. Marble Fairbanks Architects
6. & 7. Morphosis



1



5



2



6



3



7

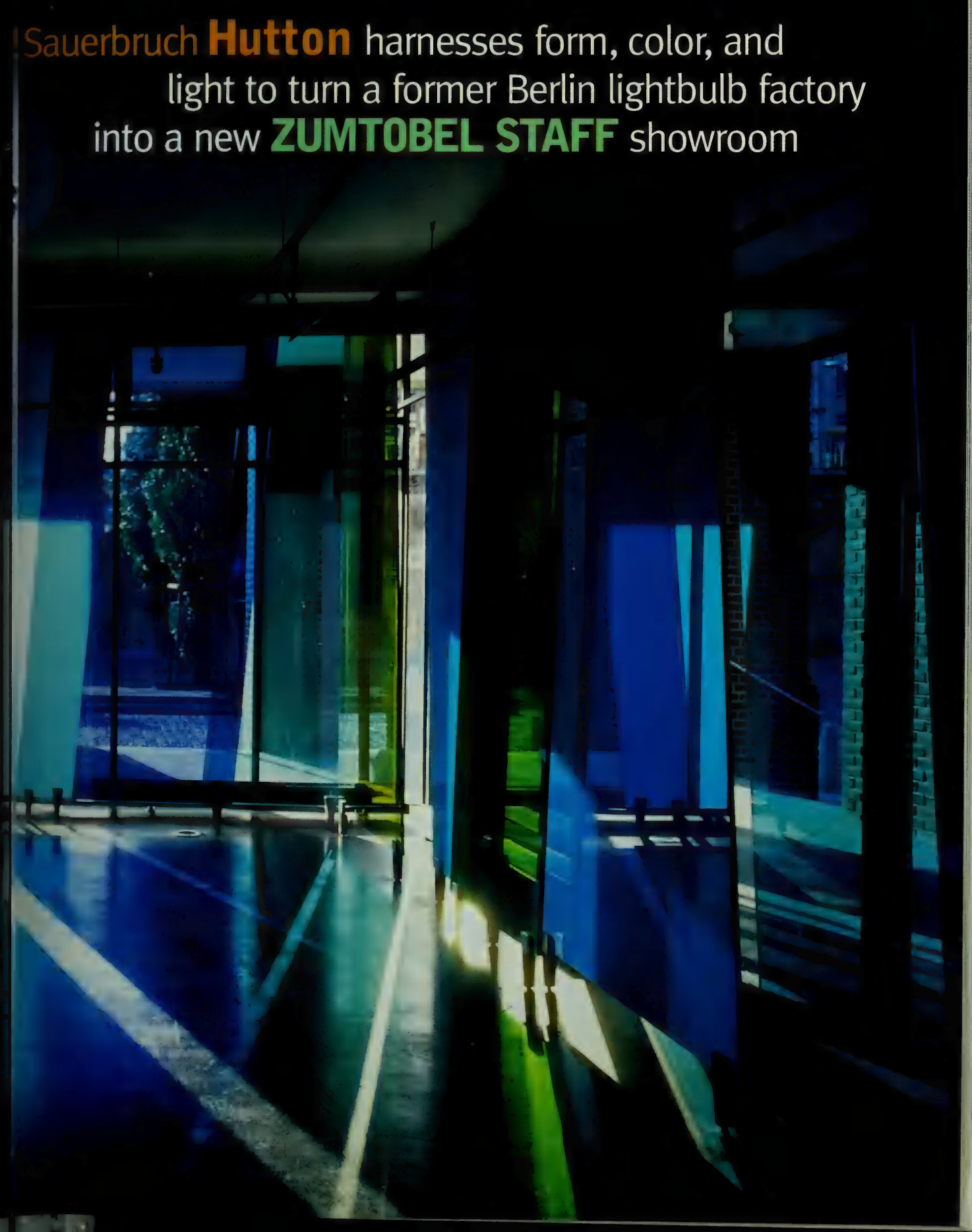


4



Colored-glass panels refract rays of sun and electric light. Niches in freestanding plastered walls showcase artwork and the quality of light cast by different luminaires.

Sauerbruch **Hutton** harnesses form, color, and light to turn a former Berlin lightbulb factory into a new **ZUMTOBEL STAFF** showroom



By William Weathersby, Jr.

Like a prism held up to the sun, tinted-glass wall panels in a new Berlin showroom refract rays of light, casting shadowbox patterns in three dimensions. Departing from the conventions of product display, lighting manufacturer Zumtobel Staff recently launched an inspired campaign, commissioning an international roster of inventive architects and artists, including American sculptor James Turrell, to design its regional centers across Europe. These gallerylike settings immerse clients in sensual, highly theatrical vignettes. In this vein, Sauerbruch Hutton Architects clearly broke free of standard showroom constraints when envisioning the 8,000-square-foot Zumtobel Staff outpost in the German capital, creating a kaleidoscope of color and light.

Partners Matthias Sauerbruch and Louisa Hutton—known for exuberant color on such projects as the GSW Headquarters, with its bold patchwork facade of Paul Klee–inspired hues [JUNE 2000, page 156]—approached the showroom assignment, according to Sauerbruch, "as an experiment in the transformative properties of light." Of course, light is essential for the human eye to differentiate along the spectrum of visible color. Taking cues from this scientific principle, the partners shaped space by manipulating color wed to the sun's rays and to electric light.

Set in a harborside industrial district of former East Berlin, the Zumtobel Staff Information Center occupies a century-old structure built, fittingly, as a lightbulb factory. Fronting the street and framed on two sides by pedestrian arcades, the two-floor, to-the-trade facility houses showrooms, offices, and areas for meetings, exhibitions, and client entertainment. With private and public zones merging, a reception desk doubles as a cappuccino bar, while display niches showcase either art or the quality of light itself. The existing shell and floor slabs remain intact, except for a custom spiral stair inserted between levels. The largely open plan is articulated by sculptural interventions: partitions of colored glass or brightly painted plaster, dropped cloud-shaped ceiling sections, and chunky tables and cabinets designed by the architects and set about sparsely as freestanding pieces that evoke the work of Donald Judd.

Showstopping illumination provides a layer of refinement, for which Sauerbruch Hutton collaborated with a Zumtobel Staff in-house design team, headed by Rainer Dommershausen in Berlin and Herbert Resch in Dornbirn, Austria.

To mask unremarkable views of the arcades—while infusing the showroom's inner proceedings with a sense of mystery—the architects set a collage of colored glass panels along the two existing curtain-wall elevations. The panels, which sandwich multiple layers of colored film between sheets of glass, are suspended by rods from steel tracks, and rest on delicate cast-aluminum feet. The horizontal assemblage features translucent and transparent sections, with some panels partially overlapping in multilayered blocks of color. Ceiling tracks parallel to these screens accommodate virtually any of the company's adjustable fixtures for varied lighting effects—projecting images ranging from ghostly to sharply etched onto the color fields. During the day, the intermingling of filtered sunlight and electric illumination casts ever-changing patterns

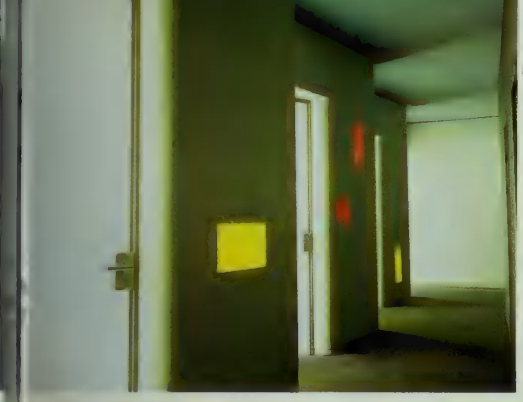
Contributing editor William Weathersby, Jr., is a freelance writer specializing in architecture. He frequently covers lighting design for ARCHITECTURAL RECORD.

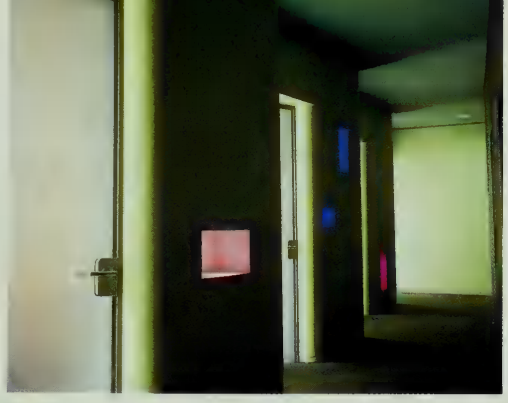
Project: *Zumtobel Staff Information Center, Berlin*
Architect: *Sauerbruch Hutton Architects—Matthias Sauerbruch, Louisa Hutton, principals; Fredrik Kallstrom, Andrea Frensch, Jan Laufer*
Client: *Zumtobel Staff*
Engineers: *Bahne Ingeniuere (environmental); Leonard Andra & Partner (structural)*





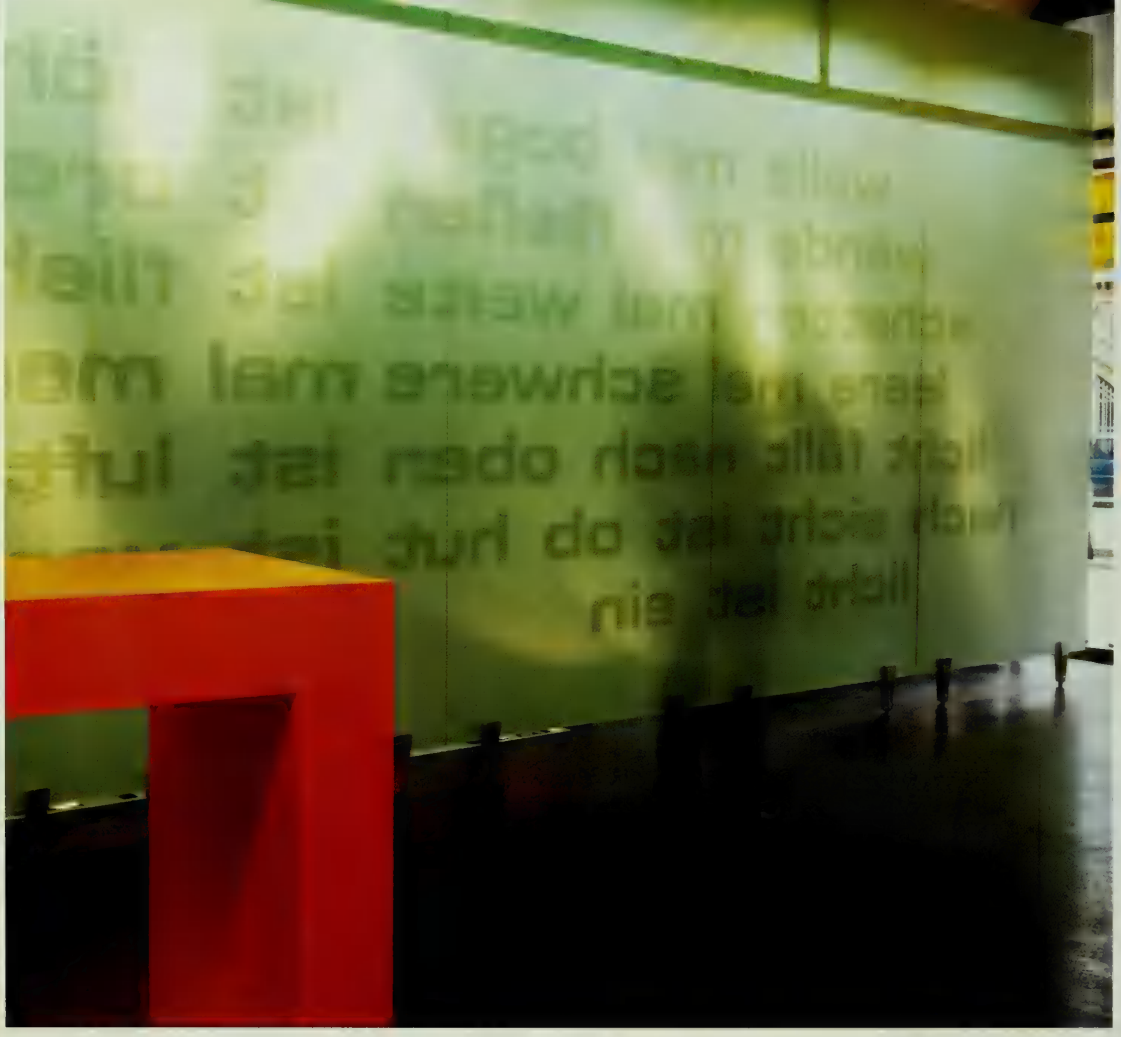
PHOTOGRAPHY: © BITTER + BREDT PHOTOGRAPHY





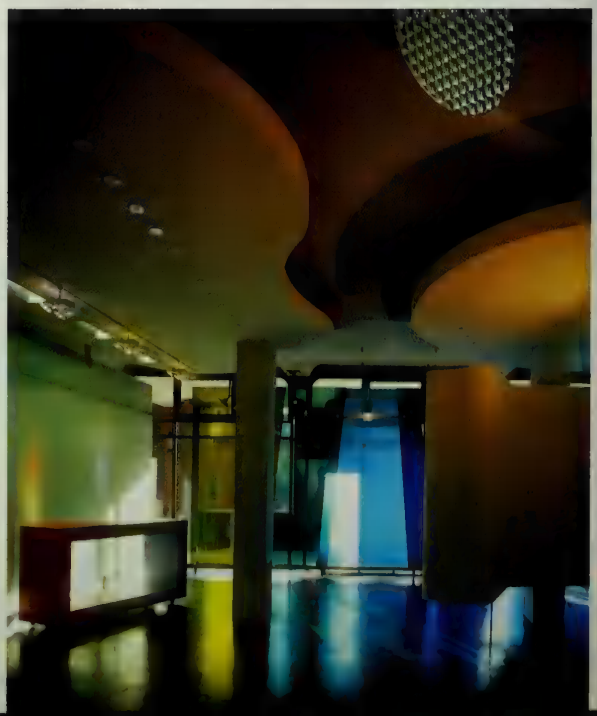
A former lightbulb factory (opposite, top) houses the Zumtobel Staff showroom. Corridor niches (two views, left) change color with light. An armature of spotlit, tinted glass screens the arcades (below).





Curving walls and cloudlike ceiling sections (opposite and below) demonstrate the effects of lighting fixtures. A paean to color and light is legible from behind a sandblasted glass wall (left).













1. *Entrance*
2. *Reception*
3. *Cappuccino bar*
4. *Showroom display*
5. *Pedestrian arcade*
6. *Office*
7. *Meeting*
8. *Storage*



Opaque, colorful fins behind the stair help clients test lighting (opposite). Computer-controlled fluorescents in an overhead aperture simulate daylight (left). Sculptural dividers (above) evocatively cast shadows.

onto the black-pigmented concrete floor like a time-lapse series of abstract paintings. At night, the internally lit showroom becomes a festive lantern facing the adjacent public square.

Cutting a swath through the ground-floor exhibition space, a serpentine wall channels circulation. Each side of this undulating plaster-clad partition features niches showcasing different types of light sources—compact fluorescent, halogen, incandescent—and a range of fixture styles. "The curved wall of each niche," says Sauerbruch, "acts as a blank canvas for the lighting effect created by that compartment's fittings." In the wall, two window slots frame views across the showroom.

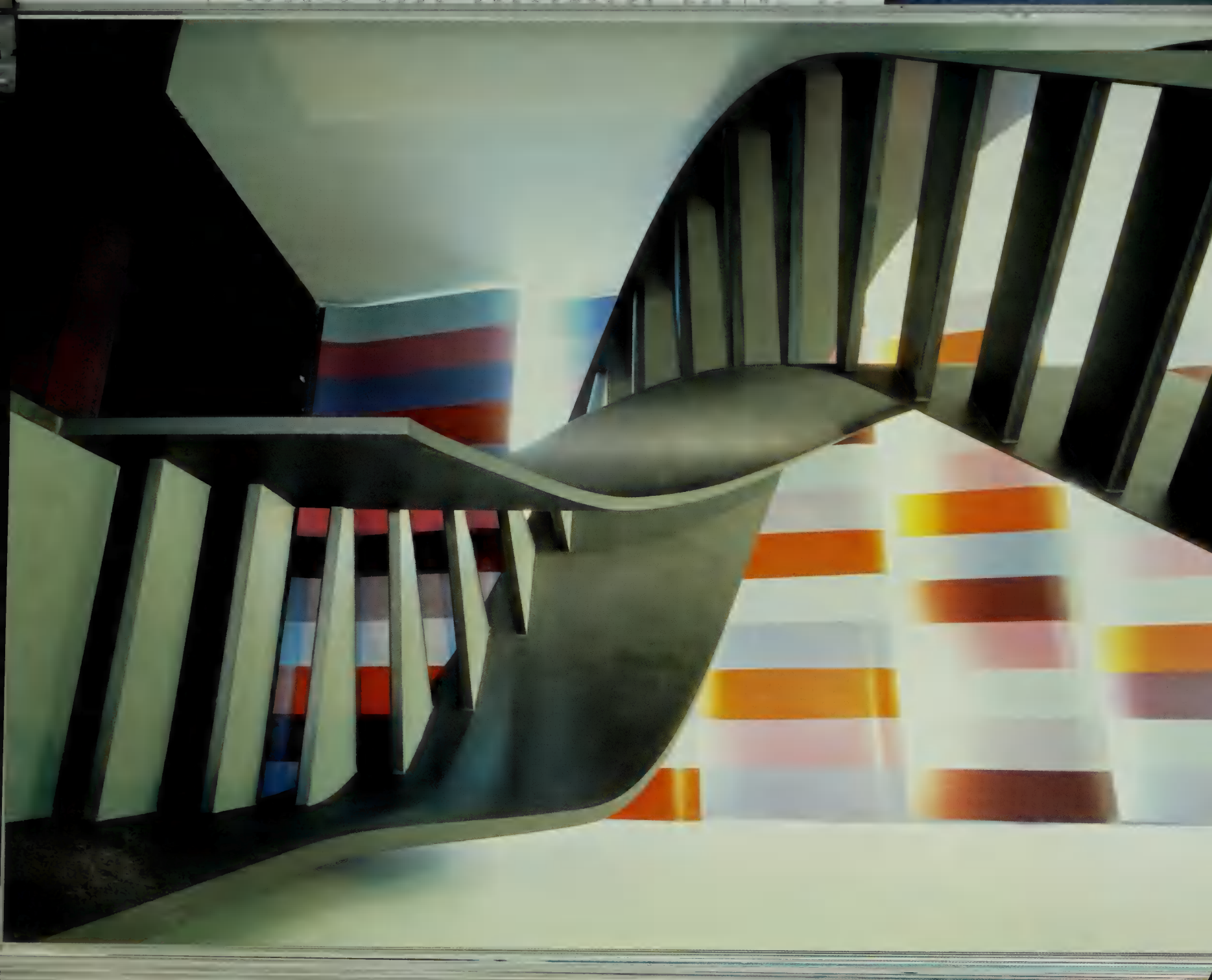
Tucked into an alcove at the back of the first floor, the stainless-steel staircase gracefully swoops up a flight to meeting rooms. For the ascent, Sauerbruch and Hutton flipped the switch on their balance between color and light: Whereas the colored-glass screen on the exhibition level plays on the notion of transparency, a series of colorfully striped panels mounted behind the stair are opaque, yet subtly set aglow with backlighting. Besides playing a decorative role, the oversize color-strip panels, or "fins," as the architects dub them, double as product-demonstration aids. Each fin is lit by a different lamp model, enabling clients to compare and contrast the quality of illumination and its effects on color.

Upstairs, offices and conference rooms have sandblasted glass doors, set on angle. As the light level within each room varies during demonstrations, the translucent doors become radiant lightboxes facing passersby. Rectangular, fiber-optically illuminated niches in the corridor walls continually shift in color to showcase special lighting scenarios.

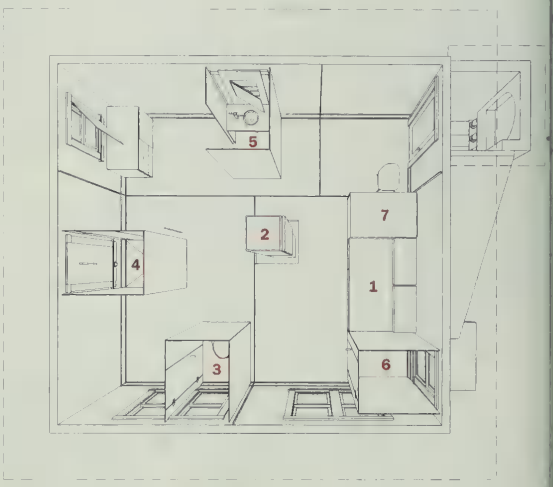
At one end of the Zumtobel Staff center, a wall of sandblasted glass, which serves as a projection screen for colored lamps, stands as a memorable signature of both architect and client. A commissioned text, an ode to the poetic quality of illumination, spans the milky surface, its solid letters raised in counterpoint to the translucence of the glass. Streaked by light, one central phrase sums up the ethos of the showroom: "Color equals space." ■

Sources
Lighting: *Zumtobel Staff*
Glazing: *VEGLA/Kinon (manufacturer); Jastra (fabricator)*
Aluminum panels: *Jastra*
Cabinetry: *Schreinermeister Biermann & Knoop (custom woodwork and furniture)*
Plaster: *Weck & Linke*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**



Elliott + Associates creates a pure white guest suite called NORTH that distills serenity to its essence



1. *Bed*
2. *Flue with chalkboard*
3. *Toilet*
4. *Shower*
5. *Sink/vanity*
6. *Closet*
7. *Desk*

By David Dillon

Standing inside "North" is like standing in a view camera watching the light move from point to point throughout the day. At certain moments, it is sharp and penetrating; at others, merely a soft, vaporous glow. Occasionally the floor and walls seem to dematerialize and the space becomes a pure abstraction: light as its own subject and context.

North is a small garage apartment named for the turn-of-the-century Territorial photographer North Losey. Built in the early 1920s, it sits in the middle of Oklahoma City's Heritage Hills historic district, overlooking downtown. In front of it stands an Italianate mansion of the same vintage, now owned by Losey's granddaughter. To either side are other grand houses built by the city's founding families, oil tycoons and speculators who cashed in on the land run. Originally a second-story maid's apartment above a garage, North has been transformed by Oklahoma City architect Rand Elliott, FAIA, into a space of almost monastic purity. For the client, the project was a way to honor a man she never knew; for the architect, an opportunity to celebrate place.



"I wanted to design something that honored the past but was also part of the present," Elliott explains. "So, instead of neo-Dust Bowl, I created this abstract, light-filled space with no telephone or television, where guests can open the windows and let the breezes blow through."

Because North stands in a National Register district, exterior changes had to be minimal. Elliott peeled back the outside walls to the studs and re-covered them with Gunite. He also installed double-hung wooden windows to match the originals and designed carriage doors for the garage—still in use—to replace clunky 1950s versions. The touch is light, the materials familiar and economical.

David Dillon is the architecture critic of the Dallas Morning News *and a contributing editor of* ARCHITECTURAL RECORD.

Project: *North Guest Apartment*
Architect: *Elliott + Associates—Rand Elliott, FAIA, principal-in-charge; Michael E. Hoffner, project architect*
General contractor: *Lingo Construction Services*

Elliott transformed maid's quarters above a 1920s freestanding garage (above) into a tranquil guest retreat (opposite), with simple, pure white furnishings and luminous translucent partitions.





Sandblasted glass volumes enclose the shower and lavatory separately (opposite). Guests can write messages on black slate affixed to a central column (right, top). Small vintage photos throughout the space are precisely lit (right, bottom).





The only hint of the surprises to come is the exterior staircase. The original wooden steps have been replaced by steel grates, which rise to a glass door marked with a square of black film and North Losey's signature: a photographic negative substituted for a nameplate. The architect divided the apartment itself, only 475 square feet, into four sections, each focused on a window and a function: entry, dressing, toilet/shower, bedroom. The sections are separated by sandblasted glass panels that preserve luminosity and a level of privacy. On the four exterior walls hang small original portraits and family photographs by Losey himself: an overlay of traditional personal history in a spare contemporary setting. Light from recessed ceiling fixtures casts a halo around each image and also bounces off the floor to give the interior glass walls an ethereal glow.

In the center of the space stands a square white column—probably an old stove flue—with one side clad in black slate, where guests can scribble messages and impressions. Wood flooring at the column's base has been replaced by a narrow glazed reveal that exposes the garage below, physically and metaphorically linking old and new, utilitarian and rarefied.

If the plan is clarity itself, North's moods are as enigmatic as photography. Elliott's four Minimalist spaces parse the Oklahoma light. The northern rays are typically soft and forgiving, a reprieve, while the western light comes in straight and hard as a winter storm. A hinged panel in front of the west window is coated with a holographic film that, for a few minutes each day, splashes the room with color. The windows are also equipped with shades that can be drawn tight to create a silent black box. North's moods range from serene and contemplative to cinematic and phantasmagoric. It is, as Elliott says, "a place to get reacquainted with peace and quiet," but also to listen to the land.





Elliott's fascination with the number four—four spaces, four seasons, four cardinal directions—reflects his admiration for Oklahoma's Native American history and culture. Most of his projects include evocations of the rituals and ceremonies of these native peoples, from their worship of the wind spirit to their use of stone circles and the four sacred colors—black, white, red and yellow—in their clothing and housing. The evocations are more subtle and abstract in North, but the intention is the same, to connect a building to a place.

North also demonstrates Elliott's skill at achieving a lot with a little, using inexpensive materials—plywood, concrete block, oil-field pipe, waste glass—to create complex and elegant effects. This aesthetic is reflected in the bathroom's steel-rod towel racks and toilet-paper holders, the acrylic tape connecting the corners of the glass walls, and the white plastic laminate surfacing the furniture. Everything has been kept simple and direct to retain the serenity of the space and the force of the idea that inspired it. ■

Sources
Paints: *Sherman Williams*
Windows and doors: *Weathershield*
Plastic laminate: *Formica*
Cabinetry: *Contemporary cabinets (custom)*
Lighting: *Lightolier, Halo, Elco, Hubbell*
Sink: *Cherry Creek*
Toilet: *Kohler*
Faucets and controls: *Kroin*
Shower: *Jetta; Kallista (showerhead)*
Refrigerator: *General Electric (compact)*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**

Complementing the pure, simple geometries and sheer materials (top and opposite), the sink is of clear glass (above). A holographic window coating brings colorful light into the space (opposite).





In New York City, **Archi-Tectonics** transforms a vintage warehouse into **DUGGAL**, a luminous, streamlined "factory" for the digital age

By Sarah Amelar

Icy blue, sandblasted glass walls, high-gloss floors, and luminous, virtually floating volumes are hardly the standard fare of factory architecture. But Duggal does not operate a standard factory—at least not in the gritty, old-fashioned assembly-line sense. The graphics and photo-imaging company's New York City production headquarters, designed by architect Winka Dubbeldam and her firm, Archi-Tectonics, is primarily a turn-of-the-millennium phenomenon: a digital factory. And although the space has a streamlined—one might even say, stylish—elegance, it is as precisely crafted to its modes of production as a General Motors plant. Though graceful and Minimalist in appearance, Duggal is, in unexpected ways, a work of lean functionalism.

To achieve spare and apparent simplicity, the architect scrupulously extracted the program's essence—throughout the design phase and even into construction—as the client reinvented itself. Major shifts in technology were recasting the very nature of Duggal: its processes, products, and clientele. The company had already changed dramatically since 1957, when India-born Baldev Duggal founded his one-man operation, shooting film in his bedroom and processing it in his bathtub. But recent developments were even more radical. His 175-employee company is now capable, for example, of translating cybercommands into weatherproof prints large enough to wrap city buses or entire buildings.

When Dubbeldam first came to Duggal in 1994, she was merely a customer, whose work made a strong impression on Baldev Duggal's son, Dave. After she and Dave began discussing the challenges of creating a space—real or virtual—for a cybercompany, he convinced his father to hire Archi-Tectonics. Initially the projects were modest, but within a few years, Dubbeldam's small New York firm was commissioned to convert an 18,000-square-foot Manhattan warehouse—an L-shaped ground floor of a six-story 1881 building and its neighboring structure—into Duggal's new production headquarters. A city block deep, the 18-foot-high space has large windows at either end. Baldev Duggal was eager to move his staff from its 16-story rabbit warren to a single open floor—he envisioned an efficient, light-filled venue where he and his workers could readily interact.

Given the company's evolving state, both architect and client needed to fathom the design implications of dustfree digital scanning and Duggal's other new hyperclean work. The sense—and reality—of smooth, pristine surfaces in a fluid, infinitely vast space became essential pragmatically, as well as conceptually and psychologically. For handling massive quantities of huge-scale, sometimes delicate, prints, Dubbeldam realized, production areas had to feel, and be, as unencumbered as possible.

When the client requested a sales-and-marketing floor in the facility, Dubbeldam introduced a 6,000-square-foot mezzanine that would leave production zones pure and separate. To allow this midfloor to float visually, Archi-Tectonics and its engineering consultants devised a floor only 8 inches thick, made of concrete with a steel edge beam, that they could cantilever from an existing brick side wall and concrete columns. The long, unob-

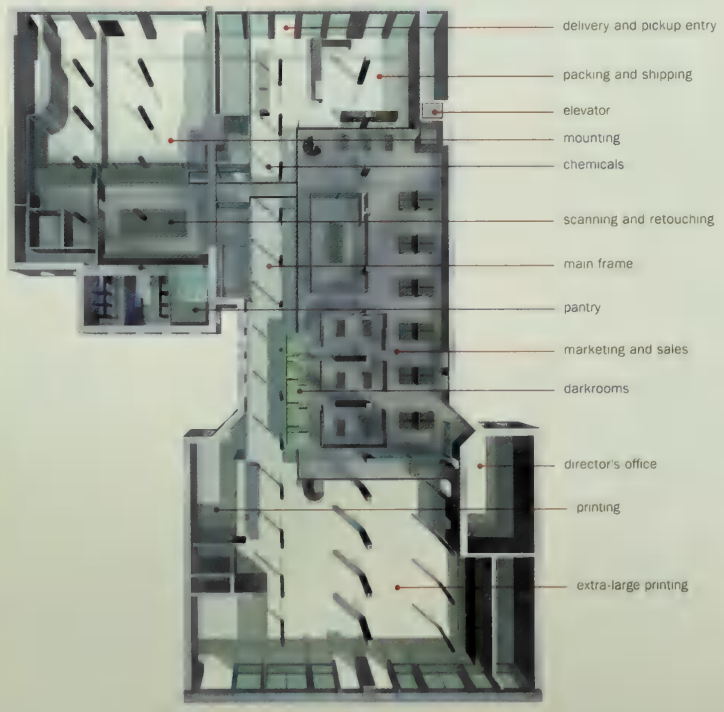
Previously hidden cast-iron columns, in rhythmic procession, became a foil for the design's clean-edged Minimalism and play of light and reflection (this page and opposite).



Project: *Duggal Digital Headquarters*
Architect: *Archi-Tectonics—Winka Dubbeldam, principal designer; Roemer Pierik, Stephen Roe, Silke Oetsch, project team*
Engineers: *Severud Engineers (structural); IB Consulting Engineers (mechanical)*



One challenge was to keep the mezzanine thin and visually floating—an effect achieved with cantilevers and concise steel rails (this page and opposite).



FLOOR PLAN







Throughout the mezzanine (above) and main floor (opposite), sand-blasted glass partitions retain a level of privacy, while revealing glimpses through a clear, unfrosted band.

structed spans beneath this floor plane gave the architects flexibility as the client reconsidered emerging technologies.

In shaping the design, Dubbeldam discovered a welcome surprise: beneath bulky encasements were two rows of Corinthian cast-iron columns. "Those hidden columns were a gift to us," she recalls. "The project then came together in a really interesting way." Dark, slender, and ornate, these elements became a foil to her clean-edged Minimalism and the project's high-tech character.

Preserving spatial flow, the architects carefully kept the elaborate mechanical installations—ranging from separate ventilation networks for different activities to complex chemical treatment, plumbing, and air-conditioning systems—to a visible minimum. "It was my goal," says Dubbeldam, "to take this unbelievable array, and make the whole place look completely simple and natural—when, in fact, it was a big struggle to make sure you wouldn't see those things." On the building's west edge, she created a double wall with a plenum for most of the mechanical systems. (The overhead air-conditioning ducts, currently in place, will be removed.)

Attuned to the quality of light as it relates to different activities and experiential climates, the architects recognized that big industrial fixtures giving precise color rendition would be essential in the large 24-hour production areas, whereas for sales-and-marketing work, that same illumination could induce eye strain.

Bringing daylight deep into the space, Archi-Tectonics favored translucent sheets of glass, rather than opaque enclosures with doors, for most of the partitions, thus retaining openness. While seated workers have relative privacy, those standing can catch glimpses of adjacent spaces through a clear, unfrosted band in the glazing. (It's not as much like a peep show as it may sound.) These transparent slots vary the texture of light and, when viewed through one another, take on visual complexity as they diminish perspectivally into the distance.

The two main glazed volumes, housing respectively the new and the old—the mainframe computer with its nexus of telephonic and cyberconnections and the "wet" chemical areas for the company's vestigial traditional photographic work—flank a mezzanine-level bridge. The bridge crosses into scanning and digital image-manipulating zones in the adjacent building.

Rendering electric light at once functional *(continued on page 228)*

Sources
Paint: *Pittsburgh Paint*
Steel: *C&T Ironworks*
Concrete: *NJB Enterprise*
Lighting: *Artimede, Lightolier, Luceplan*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**





Viewed from the terrace (previous spread), glowing, undulant volumes offer respite from their gridded surroundings. Inside (this spread), square, clean-edged furniture by Jakob-MacFarlane plays against the fluid forms, clad in aluminum—chosen for its lightness, neutrality, and fire resistance.









1. *Coat check/rest rooms*
2. *Future bar*
3. *Kitchen*
4. *VIP dining and lounge*
5. *Reflecting pool*

Pompidou's trademark red, green, and blue HVAC ducts—as were the two elevations of floor-to-ceiling glass and two solid walls. The area underfoot seemed the most hospitable territory for intervention, although even here the architects were limited to loads of 110 pounds per square foot.

Jakob and MacFarlane's terrain now rises from the grid lines like volcanic eruptions, defining four large, undulant, aluminum-clad shells that range in length from 26 to 68 feet. Each one camouflages a programmatic function. Throughout this landscape, aluminum appears extensively. Brushed with hand-held machines to enhance the texture and play of light, this material was chosen for its lightness and neutrality.

The four objects or shells are lined in colored rubber: lime green for the coat-check area and bathrooms, yellow for the future bar (now housing video screens), red for the VIP lounge, and gray for the kitchen. Tables fill the unobstructed, glazed perimeter. An outdoor terrace, seating more than 150, opens from the restaurant. At the terrace's northern edge, a shallow reflecting pool buffers diners from the museum's glass corridors. Jakob and MacFarlane designed the Minimalist, clean-lined furniture, including glass-topped tables and square, injection-molded polyurethane chairs, in deliberate contrast to the lavalike aluminum volumes.

Aluminum floor panels, following the original grid, have a smooth, waxed finish, which protects the surface from stains. Just beneath this metal flooring, a layer of bitumen, above 2 inches of very light-weight concrete, cushions the sounds of scraping chairs and high heels. A 4-inch-deep plenum be-

Project: *Restaurant Georges at the Centre Pompidou*
Architect: *Jakob+MacFarlane—Dominique Jakob and Brendan MacFarlane, principals; P. Gardera, E. Cheong, P. Macaigne, B. Douliery, O. Leroy, A. Duvivier, S. Huong*
Engineers: *RFR (structural), SETEC (electricity and plumbing), INEX (ventilation)*



At Georges' entrance, an existing rectilinear portal contrasts with the new forms (opposite left). In a striking scale play (opposite right), a huge, truncated projection from the central shell juts out—like a chimney or undersea creature—into the main dining area. Throughout this interior landscape, volumes and openings frame views, here creating a vivid sequence of color (this page).





neath the raised floor carries electrical wiring and plumbing to the four shells. The new floor feels more solid than the Pompidou's original raised flooring (which literally bounced), and it also visually ties together the architectural elements.

Physically connecting the forms to the floor, however, was not easy. Each volume is anchored with up to 27 spring connections, attached to steel plates that are cemented to the concrete slab. Accommodating the weight restrictions and the underlying concrete floor's scant 4-inch depth, the springs help prevent deflection due to static loads.

Without 3-D computer modeling, it is unlikely that this highly topographic project would have been conceived, much less built within budget and on schedule. The technology not only allowed for instantaneous visualization and molding—stretching and collapsing—of the forms, but also influenced the design's development. Though the shells contain within their skins networks of electrical wiring and plumbing, they appear remarkably thin—especially at openings, where aluminum and rubber meet almost at knife edges. The engineers, RFR, conducted computer analyses, enabling the architects to reduce these edges to nearly two dimensions: a quality reflecting the computer model and its visual lack of mass.

Interestingly, early on, the architects modeled four rectilinear boxes, not at all the forms we see today. But what better place to introduce so-called blobular design—akin to the computer-influenced, non-orthogonal work of, say, Asymptote Architecture and Gregg Lynn FORM than the Pompidou with its a rigid grid? The juxtaposition is strong both visually and ideologically: Piano's and Rogers' work, with prefabricated parts and a celebration of the building's guts on its exterior, embodied their generation's view of the future of modern architecture, whereas today's cutting-edge building-shell designs often bear no visible trace of innards. While Jakob and MacFarlane don't profess allegiance to any "Blobitectural" school, they have exploited the computer's capacity to present skin plus structure simultaneously—as a smooth unity.

Happily, the architects also found the right contractor to make their project a reality. The shell construction took place on France's North Atlantic coast at MAG, a boat-building enterprise that produced several America's Cup entries. Combining advanced technologies with artisanal craft, the fabricators cut the aluminum skeleton by computer-directed water jets, but the skin panels by hand. They then hammered and soldered the forms following generations-old techniques for fine-tuning metal hulls. The four volumes, in sections, were assembled on site, as the size of the Pompidou's freight elevator limited the maximum dimensions to 13 by 9







Openings into the voluptuously red VIP lounge (this page and opposite top) clearly show the skin edges—aluminum and rubber sheeting—narrowly separated by a recessed aluminum band. Steel lavatory fixtures (opposite bottom) recall the Pompidou's own exposed innards. One of the few shells with any closure, the VIP lounge has accordion doors to keep out wanna-bes.

From the future bar, yellow rubber flooring creeps out like a welcome mat into the main space (below). The voids are as sculptural as the volumes themselves (opposite).



feet. Once in place, the shells were lined with colored rubber sheets.

The restaurant's concessionaire, selected after Jakob and MacFarlane had won the competition, embraced their design. Named Georges after Georges Pompidou, the restaurant debuted in February to an enthusiastic public. Georges was conceived as a hip restaurant/cafe that would stay open long after the museum's 10 P.M. closing. Day and night, a discreet elevator, taking diners directly from the outdoor entry plaza, up one floor to the base of the tube-encased, zigzagging escalator, completely circumvents the entry atrium and museum ticket booth. Turnstiles at each of the main galleries keep guests from sneaking a free peek at the art.

As for Renzo Piano, while he had little contact with Jakob and MacFarlane during the design process, he has since supported their treatment of the space. Having inserted one of the first projects of the 21st century into a monument of 20th-century Modernism, the architects are breathing a sigh of relief—that is, before heading off on an entirely different mission: to renovate two old theaters in the French provinces. ■

Sources

Aluminum: *Mag (shell fabrication); Lindner (floor)*
Lighting: *Walter International, Megalit, Guzzini (custom design by Jakob+MacFarlane)*
Glass: *Saint Gobain, Conforta*
Acoustical ceilings: *Texaa*
Blinds: *Mermet (solar control)*
Furniture: *Cappelini (fabrication of custom design by Jakob+MacFarlane)*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**

In New York City, Marble Fairbanks Architects shapes a SOHO LOFT with planes of light instead of walls





By Clifford A. Pearson

Lofts seduce us with their brazen use of space—all that square footage open to the naked eye. In reaction to the discrete (and discreet) rooms of traditional homes, lofts knock down walls and conventions. Great concept. But, alas, most people need some privacy, at least some of the time. So, these places tend to be architectural battlegrounds between the urge to show it all and the need to nest.

A 2,000-square-foot residential loft in New York City's SoHo, designed by Marble Fairbanks Architects, addresses this dilemma by offering a series of glass veils that slide in and out of view. While the idea of movable-glass partitions is hardly new, it comes to life here through multiple sources of daylight streaming in from above and a purposeful blurring of what's indoors and what's not.

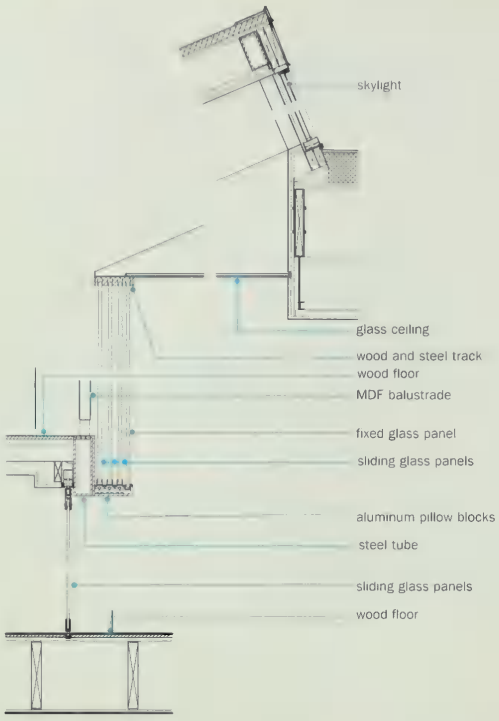
"Most of our projects deal with analyzing modern domestic life," explains Scott Marble, one of the firm's two partners. "How do people today integrate work, family, and pleasure? In a loft, this is especially challenging." Karen Fairbanks, the firm's other partner, adds, "We like to look at the traditional hierarchies of space—what is private, what is not. This loft pushes the openness of domestic living more than any other project we've done."

Simple in plan, this home for a photographer, his wife, and their two small children occupies the top floor of an old industrial building and includes a new roof deck as well. Using steel-and-aluminum hardware normally specified for sliding metal partitions in factories and warehouses, the architects designed a system in which tempered, sandblasted-glass panels move along tracks, transforming closed bedrooms into extensions of the main living area. A galley kitchen sits within the great room, separated only by a freestanding wall finished with black lacquer over medium-density fiberboard.

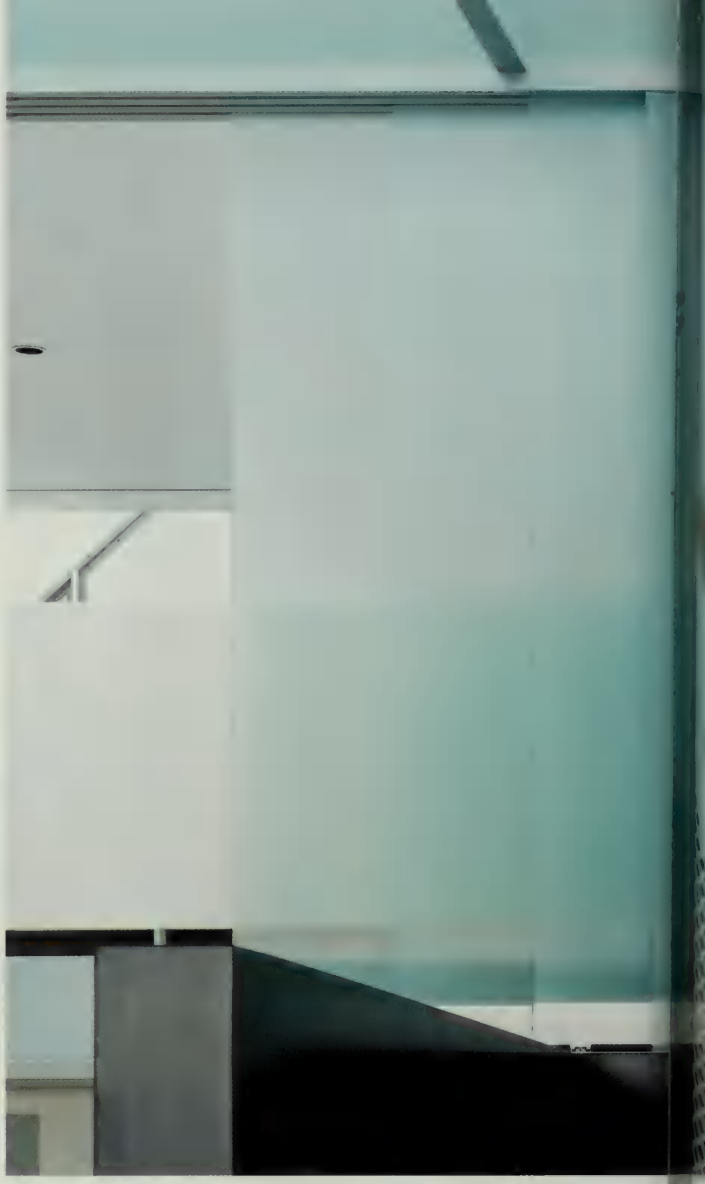
Although the loft began as a dark space with windows just on the street front, it now almost glows on sunny days—thanks to skylights added to the rear and middle of the roof. These new elements bring daylight into the mezzanine and down to the main level through a half-inch-thick glass floor adjacent to a flight of back stairs and sliding-glass wall panels on two facing sides of the master bedroom. When the panels behind the main bedroom are closed, the rear stairs, which lead to the roof deck, feel as if they're outdoors—an effect that's heightened by the metal grating of which they're made. When the panels are open, the bedroom seems to hover between roof and floor. Adding to the floating sensation is the split double view the clients get from their bed: up to the sky and down to the living and dining rooms.

Making this experience possible is a metal-and-glass assemblage that includes the east-facing skylight, a glass ceiling spanning the gap between the skylight and master bedroom, and the sliding-glass wall panels on the mezzanine and lower level. Holding the pieces together and supporting the mezzanine is a 12-inch-deep steel beam that runs the full 25-foot width of the loft [see construction detail, page 136]. "It was a monster getting it in here," says Marble of the beam. But it allows the loft's main interior wall to practically disappear when the glass panels are tucked away and is a key tool in the architects' strategy of dividing the loft with light rather than walls. "We created three zones of light," explains Fairbanks, referring to the front,

Project: *SoHo loft*
New York City
Architects: *Marble Fairbanks Architects—Scott Marble, Karen Fairbanks, partners; Todd Rouhe, project architect; David Riebe, Jake Nishimura, Marrisa Yu, Megan Feehan, project team*
Engineer: *Office of Structural Design*
General Contractor: *On the Level*



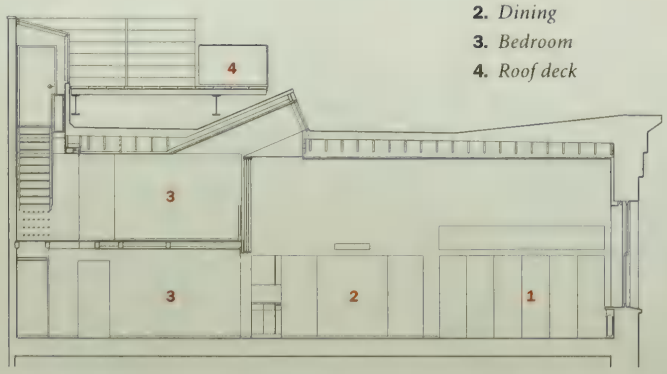
SKYLIGHT AND WALL SECTION





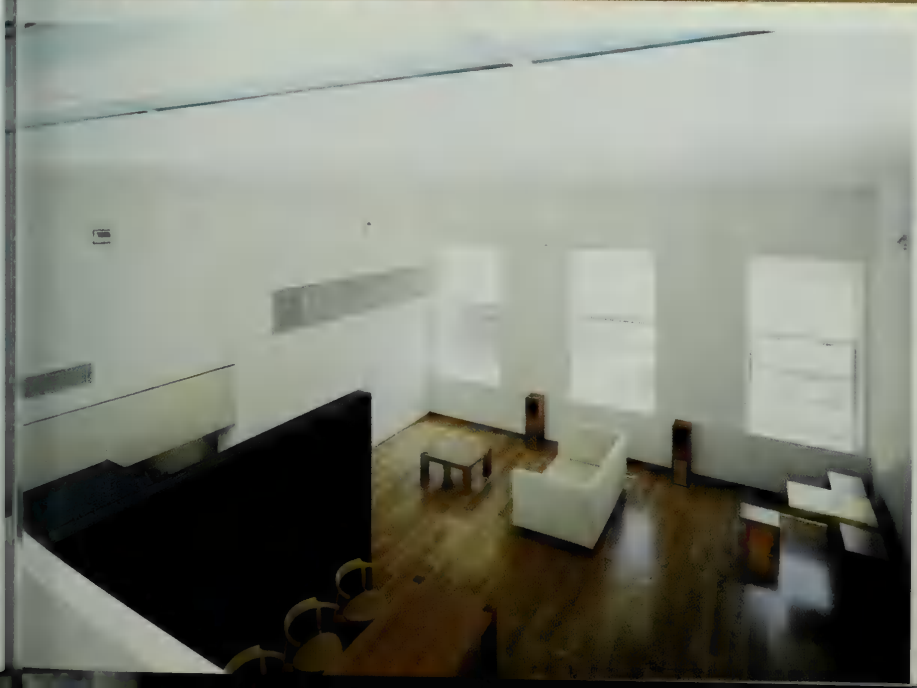


1. *Living*
2. *Dining*
3. *Bedroom*
4. *Roof deck*



EAST-WEST SECTION





Sliding-glass panels on the front and back of the master bedroom (above and opposite top left), along with pocket doors, let spaces flow into one another. The main stair (opposite top left) is cantilevered from the wall, while its railing—like that of the bedroom (opposite bottom)—is white lacquer on fiberboard.

In Las Vegas' "Venice," amid gondolas and swimming-pool-blue canals, **Morphosis** designs two dynamic new restaurants, **TSUNAMI** and **LUTÈCE**

By Lisa Findley

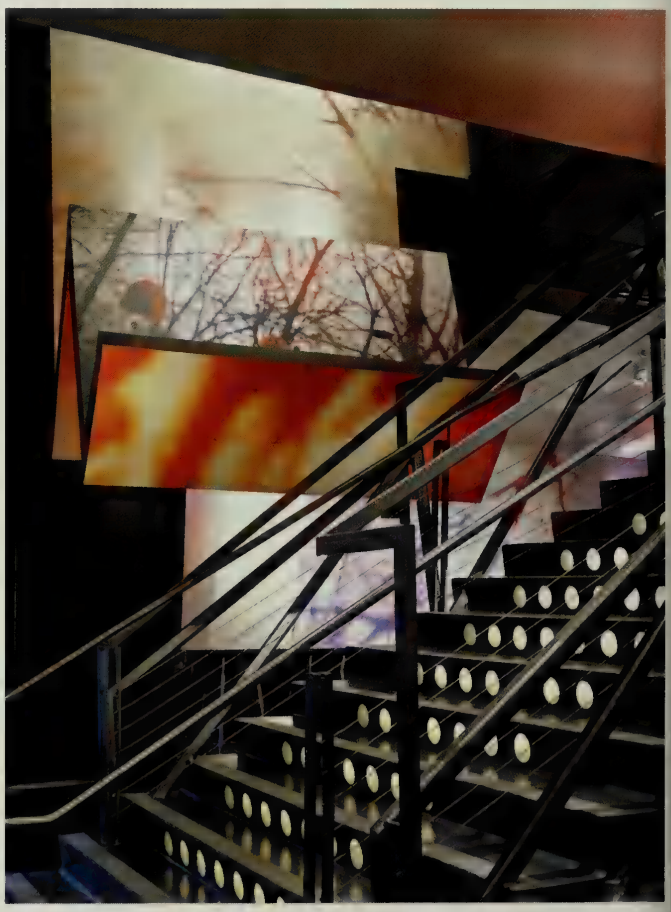
World traveler Thom Mayne, AIA, had never been to Las Vegas until he was asked to journey an hour by air from his southern California office to design two restaurant interiors there. Las Vegas' kitsch does not amuse him, and the recent spate of huge, themed hotel casinos, each mimicking the icons of different cities from around the globe, appalls him. At the same time, however, Mayne was intrigued by the client's offer of virtual carte blanche—an enticement for any architect—and ultimately he accepted the commission.

The site for both restaurants—Lutèce and Tsunami—would be scenic "Venice," or more precisely, the Venetian Resort, where a sloped moving sidewalk lifts pedestrians from the Las Vegas Strip, transporting them through full-scale re-creations of the San Marco Campanile and the Doges' Palace facade, just behind a miniature, swimming-pool-blue "Lagoon." Inside are acres of casino and a shopping mall: a mini Venice complete with gondola rides, beneath an ever-changing sky projected onto the curved ceiling's dry wall and sprinkler heads.



Hiring big-name architects has become part of the game as Las Vegas strives to upgrade its image with expensive shops and spin-offs of high-end restaurants. For this improbable commission, Mayne's Santa Monica–based firm, Morphosis, created a place of fantasy, but one that departs radically from the local norm. Rather than stoop to the level of pastiche to fool the eye,

Lisa Findley, a San Francisco–based architect, is a contributing editor to ARCHITECTURAL RECORD.



Tsunami (opposite and this page, above) contrasts strikingly with its themed setting: the Venetian Resort's "Grand Canal," a shopping mall (this page, left) with gondolas on its indoor stream.

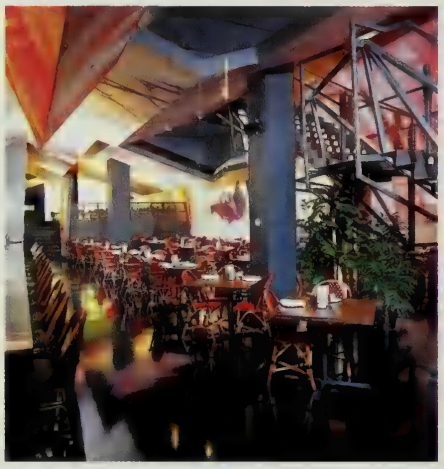
Project: *Tsunami Asian Grill*
Client: *Ark Restaurants Corporation*
Architect: *Morphosis—Thom Mayne, AIA, principal; Kim Groves, project architect; David Rindlaub, project designer; Simon Businger, Josh Coggeshal, Jerome Daksiewicz, Manish Desai, Martin Josst, Ung Joo Scott Lee, Devin McConley, project team*
Graphic designer: *Rebeca Méndez*
Engineers: *Joseph Perazelli and Martin & Petlyn (structural); AE Assoc. (mechanical); MSA (electrical)*
Contractor: *Price Woods*



Tsunami Restaurant

these architects set out to engage the body and imagination with two unexpected and unusual spaces.

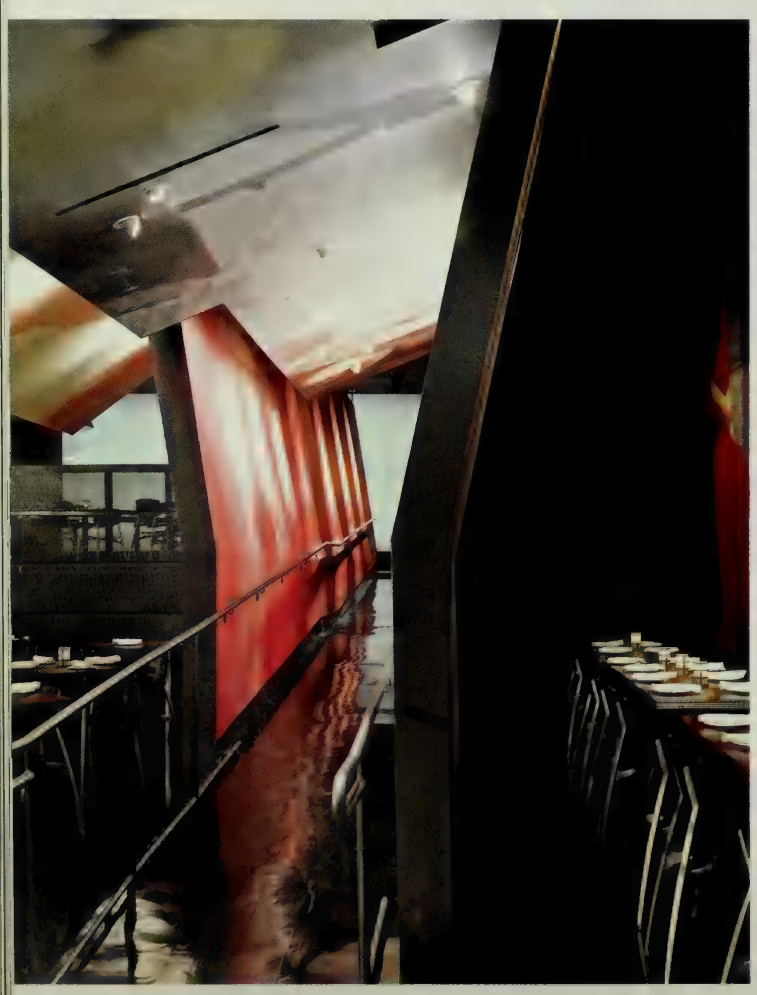
The chic Tsunami Asian Grill, serving trans-Asian cuisine, stands just off the "Grand Canal" shopping mall, while downstairs, in a corner of the vast casino, is Lutèce, sister of the exclusive New York restaurant by the same name. Morphosis set out to provide two retreats from the Venetian's noise, constant activity, and visual chaos. At Tsunami, the architects play with folded planes and surface treatments bearing pictorial content, rather than pattern or texture. At Lutèce, they continue the experimentation with spatial manipulation that has been a Morphosis hallmark for two decades. In each case, the firm collaborated with an artist to enhance the project's spatial complexity and physical richness.





At Tsunami, canted, folded wall planes and ceilings, all bearing huge photomurals, enhance the spatial complexity and dynamism (this page and opposite).

Tsunami's glass-and-steel facade is set within an elevation along an interior stretch of the "Grand Canal," just as Modernist designs are inserted into old structures of the real Venice. Diners can sit at the restaurant's floor-to-ceiling window and watch serenading gondoliers pole U-turns at the canal's end or see tourists snapping photos of each other in "Venice." Further inside the 10,000-square-foot, 326-seat restaurant, however, it is possible to be swept away by an otherworldly atmosphere.



Here, Morphosis worked with graphic artist Rebeca Méndez to submerge the restaurant in a standing tidal wave of huge, barely discernible photographs, applied to folded walls and angled ceilings that project into the deep, 28-foot-tall space. A long sushi bar, ramp, stair, and a series of dining spaces further emphasize the relative depth. The spatial continuity, however, is broken by level changes, resulting in several smaller, intimate, dining areas. A mezzanine, with seating and an open kitchen, covers three quarters of the main floor, and a portion of the principal dining area is raised a half level in the back. Perforated-steel guard rails veil these spaces from one another, allowing glimpses of light, color, and activity.

The steel stair, which dominates the space and greets customers at the entrance, was conceived as a body suspended within the multiple floor levels and layered imagery. Unfortunately, budgetary restrictions eliminated its intended perforated-steel skin, and the leftover armature—exposing the mystery of the treads' backlighting—appears unfinished and awkward in the otherwise mysterious and unabashedly beautiful space.

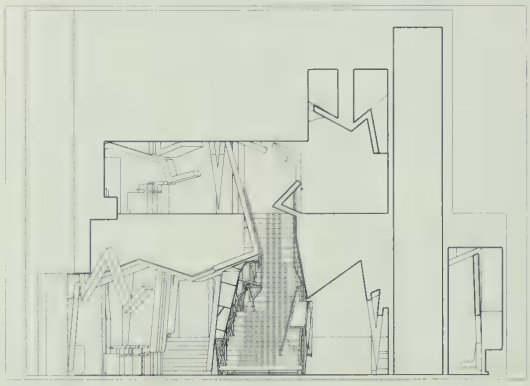
With guard rails, floors, ceilings, original walls, and the folded planes' flat edges painted a deep charcoal gray, the restaurant's only color comes from the slightly pixilated photographs. Muted reds and pale yellows dominate the front part of Tsunami, while cooler blues and violets take over toward the rear. The images are generally large—up to 140 feet long—electronically manipulated, and not quite legible, except for a phantom woman's face or tree branch or flower. Toward the back of the space, though, the murals become more readable and figurative, sometimes with Asian themes. Along the steps to the main dining area's raised half-level, a high-resolution, unmanipulated photograph shows people at twice life-size staring out, giving the wall plane an unexpected three-dimensionality.

Despite the dynamic pitching of ceilings and photograph-covered walls, Tsunami Asian Grill has a serene atmosphere—in contrast to the apparently calm, more exclusive Lutèce, which reveals disconcerting aspects on closer inspection.

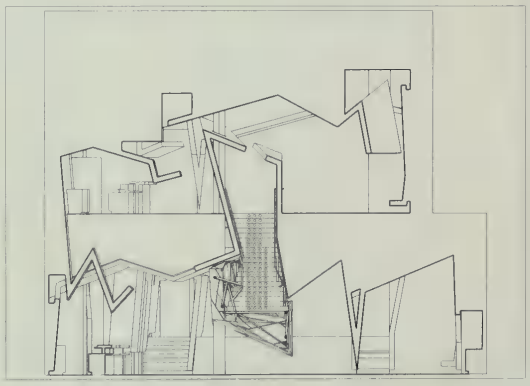
The door to Lutèce is easy to miss in a corner of the Venetian casino. Marked by a small awning, the subtle entryway discreetly pulls



Graphic artist Rebeca Méndez created Tsunami's "standing tidal wave" of computer-manipulated imagery (right) that proceeds from reds at the front of the restaurant (opposite) to cooler blues toward the back.

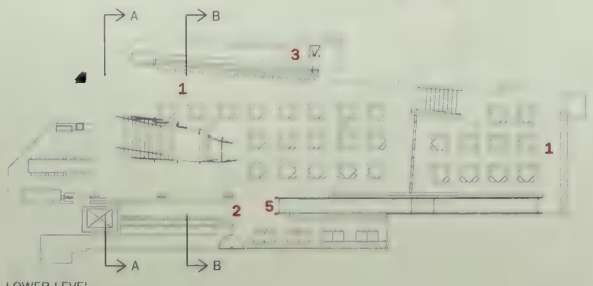


SECTION A-A



SECTION B-B

1. *Dining*
2. *Pick-up counter for open kitchen*
3. *Sushi bar*
4. *Bar*
5. *Ramp*



LOWER LEVEL



UPPER LEVEL



Lutèce Restaurant





In between the casino's glossy female figurines, Lutèce's bronze doors bear analytical plans of the restaurant (left). Behind the main dining room, a curving glass wall showcases a wine collection (opposite). Off-center bronze bands ring the dining area, as well as its machinelike chandelier (opposite and below).

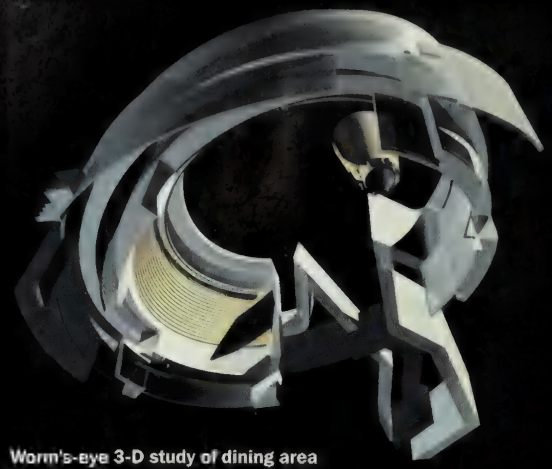
patrons from the surrounding visual chaos and jangling slot machines, through heavy bronze doors, etched with an analytical plan of the restaurant, into a hushed realm of elegance. Unlike Tsunami, where the expanse of space is immediately exposed, Lutèce hides its dining area behind the curving outer wall of the drumlike form that contains it. Patrons are greeted, then escorted around the drum's edge to an opening, unmasking the spare, sophisticated central room.

The 290-seat, 4,600-square-foot restaurant is not, however, as vertical, or centered, or completely removed from its outside world as it initially seems. Within the circular volume, clean white walls appear to spin outward, while bands of bronze step inward as they spiral around the edge. This geometry of tilting and sliding keeps the eye in constant motion around the restaurant. Hanging oddly off center in the main dining area's tall drum is a quirky, machinelike chandelier, also surfaced in bronze strips and sporting exposed spotlights. The black ceiling and floor disappear against the contrasting, brightly lit white walls, while the white-linen-covered tables float visually. Large, sculptural, pointed forms intrude overhead. A wall of wine racks slides behind a sleekly curving glass wall in a slot of space behind the drum, where a bar serves patrons awaiting tables.

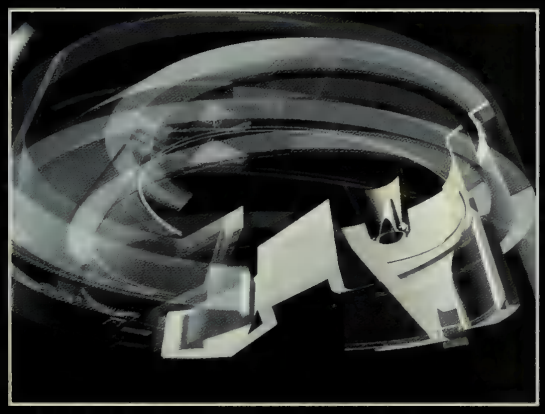
Openings in the drum at first seem haphazardly placed. A



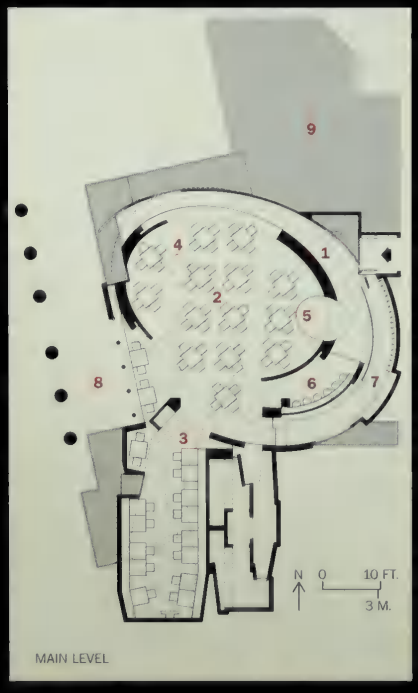
Project: *Lutèce Restaurant*
Client: *Ark Restaurants Corporation*
Architect: *Morphosis—Thom Mayne, AIA, principal; Kim Groves, project architect; Brandon Welling, project designer; Ung Joo Scott Lee, Josh Coggeshal, Ben Damron, Peter Vrcibradic, Martin Josst, Henriette Bier, Jerome Daksiewicz, Devin McConley, Manish Desai, project team*
Engineers: *Joseph Perazelli and Martin & Petlyn (structural); AE Assoc. (mechanical); MSA (electrical)*
Contractor: *Image Construction*



Worm's-eye 3-D study of dining area



Expressively centripetal 3-D view



Tilting and off-kilter forms keep the eye in constant motion, evoking the spinning of an inverted roulette wheel (above and top right). In artist Do-Ho Suh's sculpture, 19,000 tiny figures hold up a glass floor (bottom right).

1. *Reception*
2. *Main dining*
3. *Private dining*
4. *Chandelier*
5. *Soh sculpture*
6. *Bar*
7. *Wine collection*
8. *Patio*
9. *Kitchen*





smaller, more intimate, chocolate-brown dining room can be glimpsed off to the side. Behind a large cutout appears a tiny dining area, where floor-to-ceiling glazing unexpectedly reveals daylight and the tracery of the "Doges' Palace" facade with the "Lagoon" and the Las Vegas Strip beyond it. A low, horizontal aperture allows artist Do-Ho Suh's sculpture, just below the floor, to sweep from the waiting area into the dining room. Here, 19,000 4-inch tall, cast PVC human figures support a 1-inch-thick ellipse-shaped slab of glass flooring on their upturned hands. Not coincidentally, 19,000 is the maximum population of the Venetian Resort.

Tensions between first impressions and later understandings of these two interiors echo Thom Mayne's reaction to Las Vegas. At Lutèce, those who can afford to escape the clatter of Las Vegas are sheltered from it but subtly denied total comfort, as they dine on superb food within Mayne's cheeky, surreal reference to an inverted off-center roulette wheel. At Tsunami, Asian cuisines are offered in an abstract, dynamic, but oddly soothing world apart. In the bleak and garish stage-prop world of Las Vegas, the physical immediacy of both projects is refreshing. ■

Sources

Paint: *Hammerite (Tsunami and Lutèce); Dunn Edwards (Lutèce)*
Wall covering: *Large-scale print on Nutex canvas with gesso, printing by Supergrafx (Tsunami); Glant custom fabric panels (Lutèce)*
Lighting: *Targetti (Tsunami); Portfolio (Lutèce); Lutron controls (Lutèce)*
Tabletops: *Corian (Tsunami)*
Steel: *Royal Metal Works custom (Tsunami)*
Doors: *Republic (Lutèce); Collins (Lutèce); Dorma closers (Lutèce)*
Ceilings: *Armstrong (Lutèce); Interfinish acoustical (Lutèce)*
Tile: *Superior Tile and Marble (Lutèce)*
Cabinetry: *Collins custom (Lutèce); Valley Fixtures (Tsunami)*
Glazing: *Academy Glass (Lutèce); Pulp studios light wall (Tsunami)*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**

A FORTUNATE FEW *live awake* IN THE WORLD.



In uncertainty you find possibility.

In the ordinary you see the exceptional.

Be aware of the larger world around you—

it is fuel for your imagination.

INVISION

CARPET SYSTEMS

DISTINCTION ACHIEVABLE

CIRCLE 47 ON INQUIRY CARD

Invision carpets are available in more than 45 patterns and 144 colors. www.invisioncarpet.com 1.800.859.9558



It's a Birdair New World

Bright, Beautiful and Completely Practical. Explore I

Tensioned membrane is an architectural reality, a refreshing global solution for enclosing spaces both public and private. It's a new world of building design, and in it Birdair structures form dramatic sports venues and transportation facilities, stunning convention centers and malls, hotels and recreation sites. Birdair technology was meant for the next millennium because it offers every architect extraordinary possibilities -- the chance to create in new shapes and inventive configurations. Provide natural daylight and project an exciting aesthetic signature on the evening horizon.

Birdair structures are changing the way we participate in architecture. Virtually maintenance free, long lasting, resistant to wind, snow loads and temperature extremes, they are worldly practical, bright and beautiful.

Birdair Tensioned Membrane.
A technological vision that works.

CIRCLE 48 ON INQUIRY CARD

BIRDAIR

65 Lawrence Bell Drive
Amherst, New York 14221 US
716.633.9500 / 800.622.2246
www.birdair.com

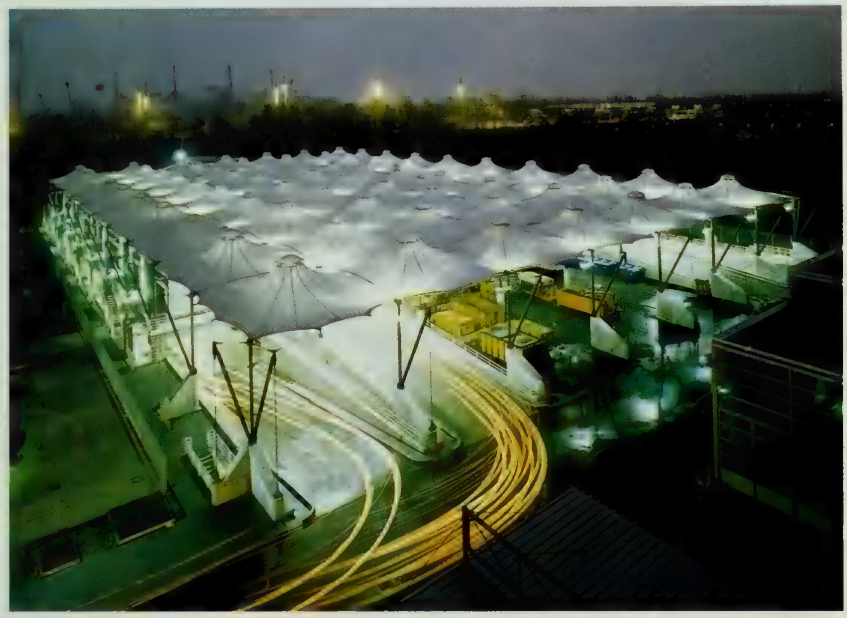
Designing with structural fabrics

ARCHITECTS MAY BE PASSIONATE ABOUT EXTERIOR TENSIONED MEMBRANES, BUT DESIGNING THEM PROPERLY REQUIRES 3-D THINKING AND CAREFULLY TAILORED DETAILS.

By Wendy Talarico

Fabric in architecture captures the imagination. It conjures romantic images: tent canvas staked out in a forest or luxuriously draped curtains making shade for desert nomads. The sculptural shapes an architect can achieve with fabric—from taut, firm roof peaks to pillowy curves—cannot be accomplished with any other material. And the atmosphere inside a fabric structure is unlike that of a conventional building: The diffuse daylight, the acoustics, the shape of the walls or ceilings, even the way the air moves through the space are all different.

Todd Dalland, FAIA, and Nicholas Goldsmith, FAIA, of FTL Happold Design and Engineering Studio in New York City, are as entranced with tensile-fabric structures today as they were when they were first introduced to them in college; in 1971, Dalland made a kind of pilgrimage, hitchhiking from Cornell University to New York City to see Frei Otto's tensile structure in the courtyard of the Museum of Modern Art. Goldsmith later worked with Otto in Germany.



The AFA Carport in Munich illustrates one of the main advantages of fabric—large areas can be covered using a minimal amount of structural material.

While some firms incorporate fabric in their design work, FTL Happold specializes in it. They design and engineer all types of fabric structures, from air-supported domes to tensile-membrane roofs. FTL Happold has even developed its own software for structural designs (as have a few other engineering firms and some of the fabricators, including Birdair in Amherst, N.Y.).

In addition to designing the structures, FTL Happold also gets about half its business from consulting with other architects who want to use fabric in their designs. Together with the British-based engineering firm Buro Happold, which is in partnership with FTL, the integrated staff provides the engineering, specifies the cutting patterns, or helps the architect develop the design. "We're trying to show other architects that working with fabric is not that hard, once you try it," Dalland says. But engineering a tensile-membrane structure is challenging, even though computer modeling helps in understanding the stresses and loads and in visualizing the finished product.

Fabric is more widely used overseas than in the United States, especially in Europe, Japan, Mexico, and South America, says Bruce Wright, editor of *Fabric Architecture*, a publication of the Industrial Fabrics Association International in St. Paul, Minn. That's because there is a greater use of canopies and awnings in these countries to limit heat gain. Since air conditioning is often considered a luxury outside the United States, tensile-membrane roofs are popular because they allow daylight while providing shade.

Cut from different cloths

Structural fabric may be used as the entire shell of a building, or as the roof or the cladding. In a smaller role, it may serve as a shading system, skylight, or entrance canopy. There are mesh fabrics (used for shading structures), clear fabrics, liners that improve the aesthetics and performance of outer fabrics, and a range of exterior fabrics for permanent structures. All of these fall into two main types of cloth: polyester and fiberglass. The coatings applied affect the fabric's performance.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 162 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Explain the advantages of using fabrics in a building's design.*
2. *Describe which elements of a building may be made of fabric.*
3. *Identify the fibers and coating used for structural fabrics.*

WWW *For this and more continuing education go to:* **www.architecturalrecord.com**

PHOTOGRAPHY: © COURTESY BIRDAIR

CASE STUDY

Project: The Columbus Center, Baltimore
Architect: *Zeidler Roberts Partnership, Toronto*
Engineer: *Peter Sheffield and Associates*
Fabricator: *Birdair, Amherst, N.Y.*

Standing next to the iconic aquarium in Baltimore's Inner Harbor, the Columbus Center, a biotechnology laboratory and exhibition space, is a landmark in its own right, thanks to the graceful fabric roof and entry canopy that swoops across the facade, shading the vast expanse of glass there from the sun. The PTFE-coated fiberglass membrane attracts people "like a circus tent," says Eb Zeidler, FAIA, of Zeidler Roberts. "It just looks like an attraction, like something interesting must be going on inside." At night, the fabric is lit from within, making the structure glow like a lantern beside the harbor.

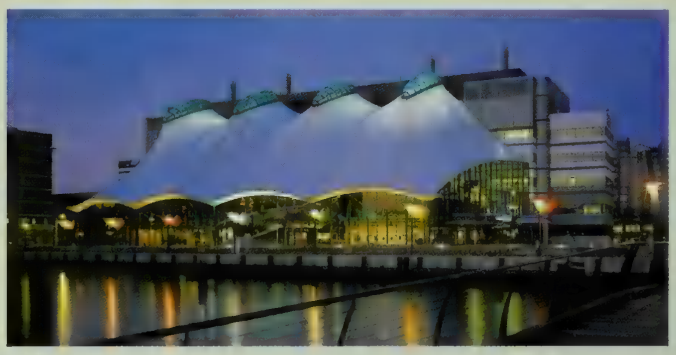
The architects, who have done many fabric structures, consider the material a good, inexpensive way to create organic forms. "Using metal and glass to accomplish the same shapes would be too expensive and look too stiff," Zeidler says. "Fabric is a wonderful material in that it is affordable and unique."

A two-layer membrane was selected for the Columbus Center because of its insulation value—primarily to keep the air conditioning inside the space during Baltimore's hot, humid summers. The reflective properties of the fabric and the lack of artificial lighting also help keep it cool inside.

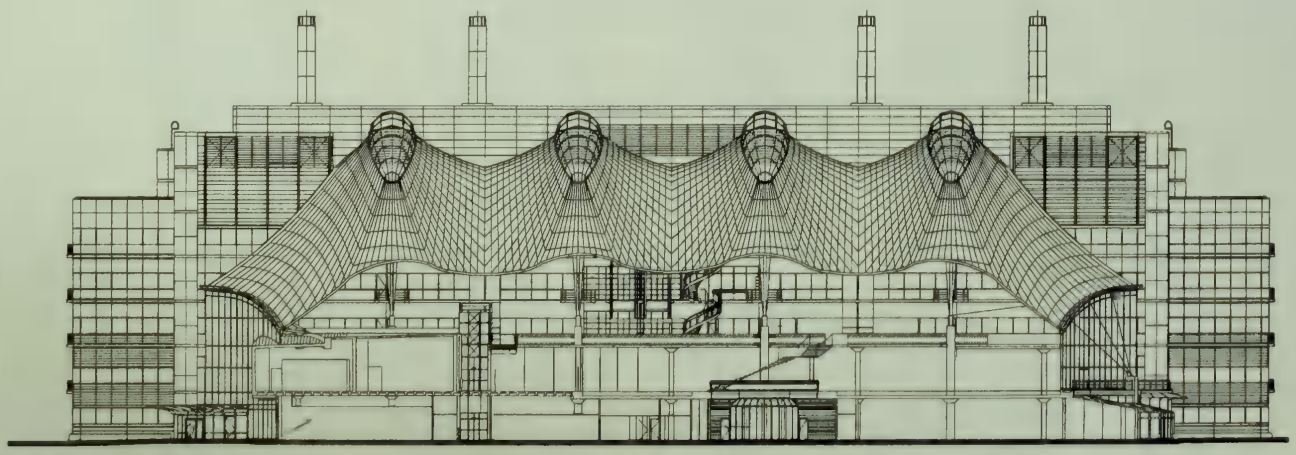
The structural membrane is supported by 10-inch-wide steel posts. Four small skylights are inserted into the fabric so that the light in the spaces below is variable. The steel frames of the skylights also serve as clamps for the fabric. All of this was preassembled on the ground and hydraulically hoisted into place.

One of the goals of the center is to attract children and young people who might not otherwise learn about biotechnology. But private research is also conducted there, giving the building a kind of dual personality. The fabric, installed on the exhibition side, clearly signals that something good is waiting inside for the young students. *W.T.*





Steel post supports and skylights are visible over an interior walkway (top). The structure glows like a lantern beside the harbor at night (right).



SECTION

Considered most durable among these is DuPont Teflon polytetrafluoroethylene (PTFE) and a newer variation of this called TEDLAR. All of these help prevent ultraviolet degradation of the base fabric while adding strength and water- and dirt-resistance.

The type of fabric that's used depends on the building type. Permanent structures typically use Teflon-coated fiberglass because of its longevity. Manufacturers say the material will last 50 years, but independent design professionals who have worked with it predict a more conservative 30 years. Owing to the material's relative newness (the first Teflon-coated fiberglass roof was installed 25 years ago and is still going strong), actual records of its longevity are not available. Its installed cost is about $60 per square foot.

Deployable structures are typically PVC-coated polyester, though the material is also commonly used on permanent buildings. Teflon-coated fiberglass is not meant to be packed and unpacked, Dalland says. "You set it up once and it stays." But polyester is more flexible. The fabric has an installed cost of about $40 per square foot. Its fabric replacement cycle is about 15 years by most estimates but, again, actual figures vary. When used on deployable structures its life span may be shortened due to the rigors of setting it up and taking it down.

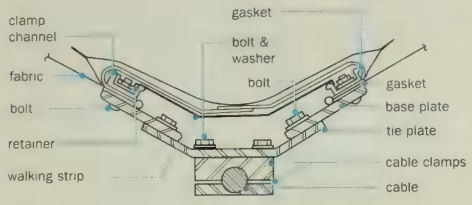
Polyethylene fabric, developed in 1994, consists of a woven polyethylene scrim that is also coated on both sides with polyethylene films. The material has a high weight-to-strength ratio, says Jay Alberts, business development manager for Intertape Polymer Group, a manufacturer in Bradenton, Fla. This material has a great deal of potential, Dalland says. "Its biggest advantage is its low cost and its greenness," he continues. "It's the only fabric that is 100 percent recyclable, and it costs about half as much as PVC-coated polyester. Manufacturers already recycle the scraps and can recycle entire roofs."

PVC-coated polyester is also being recycled, though not to the extent possible with polyethylene (which is a mono-material). An experimental but promising new process called Vinyloop, developed by two European textile manufacturers, separates the polyester fiber from the PVC compound found in postconsumer vinyl products. Teflon-coated fiberglass typically comes only in white, but PVC-coated polyester fabrics come in many colors. Fabric weights, measured in pounds per square yard, range from 4 ounces to 48 ounces, depending on wind- and snow-loading criteria.

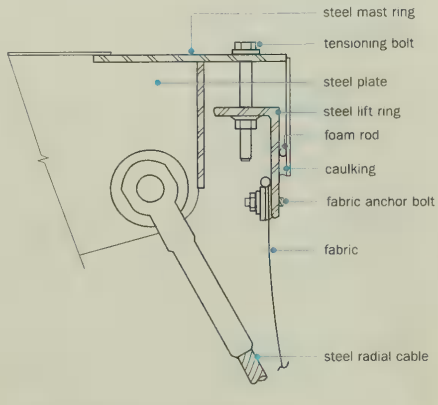
When fabric sings

Some of the hardware Birdair uses to secure fabric and attach it to the tensioning cables are shown here. Nicholas Goldsmith, FAIA, of FTL Happold, notes that these details always vary with the geometry of the tent structure, so there are no "stock" details; instead, standard details are modified for each project.

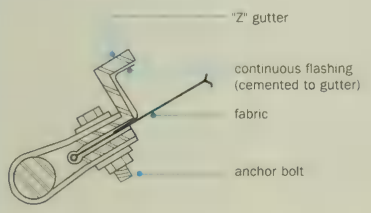
He says that the overall appearance of a fabric structure may either "sing or die" based on the care with which it is detailed, fabricated, and finished.



SECTION THROUGH CABLE CLAMP AT VALLEY



DETAIL OF FABRIC CLAMP AND TENSION RING AT TOP OF CONE OR FOLDED PLATE CANOPIES



SECTION THROUGH CATENARY CABLE CLAMP

How it performs

Tensile fabric offers many performance advantages, but the biggest is probably its strength-to-weight ratio. "It enables you to cover large areas with little material. That makes it easy to install and lessens the amount of energy used in the building process," Dalland says. "It can also mean a lighter building structure, because fabric as a cladding material is much lighter than glass or stone." The lightweight fabric also interacts more readily with natural forces than a material that's more rigid, which is one reason that the interior of a tensile-membrane structure feels so different from that of a conventional building. "You don't feel so isolated from the outdoors," Dalland adds.

Structural fabric must perform up to the same codes, standards, and loading criteria as other structural materials. It must meet



The U.S. Army Transmutable Maintenance Enclosure (TME), a self-deploying, movable tensile structure for helicopter maintenance (left).



The Riverwalk at Night, part of La Isla in Cancún, Mexico, a recreational, mixed-use "village" built with an artificial canal running through the site (right).

Fabric structures designed by FTLH.

CASE STUDY

Project: Palm Springs Regional Airport
Architect: *Gensler, Santa Monica, Calif.*
Fabricator: *Birdair, Amherst, N.Y.*

Palm Springs, synonymous with the great outdoors, felt its airport should signal this association. Like Fentress Bradburn and Associates' Denver International Airport, the peaked structure at the Palm Springs terminal is meant to symbolize the surrounding mountains, beckoning visitors. "We wanted the airport to feel like a resort," says Andrew Cohen, AIA, project director for Gensler. "The gateway to every city should be memorable in some way. The fabric makes this a landmark."

The PTFE-coated fiberglass membrane protects and shades the airport's open-air concessions and seating areas. There is even a putting green on site, since Palm Springs is a golfers' mecca.

"We realized that, with the tensile material for shade, we didn't need to close off and air condition these spaces. The fabric provides a luminous, natural light while keeping temperatures 25 to 30 degrees cooler during the day," Cohen adds. The waiting rooms are sealed and air conditioned, but there is no fabric membrane over these areas.

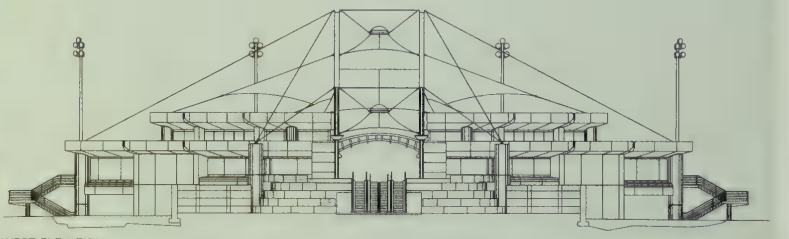
The architects had done some fabric structures, but this was their largest to date. The 39,000-square-foot structure was installed over a 10-week period. The fabric is supported by tension rings and cables; the cables, in turn, are supported by steel masts. Turnbuckles are used to tension the cable. The system provides large spans but is extremely lightweight.

The energy savings as a result of use of the fabric were "incredible," Cohen says. That's because of the lack of air conditioning and artificial lighting. Single layers of fabric were used throughout the project.

W.T.







WEST ELEVATION

Canopies at the Palm Springs Regional Airport are made of PTFE-coated fiberglass fabric (bottom). They are hung from cables attached to a tension ring (top).

fire-performance standards; the base fabrics must be noncombustible or flame-retardant.

"Sprinkler installation for fabric roofs, when necessary, requires special attention in order to integrate the sprinkler drops and head locations formally and functionally with the fabric shapes and openings," says Goldsmith. "Variances for performance-based fire-resistance analysis can be obtained in appropriate situations," says Douglas Radcliffe, vice president of sales and marketing for Birdair.

For stability, the fabric in tensile structures must curve equally in opposing directions—known mathematically as a hyperbolic paraboloid. The fabric is usually oriented so that the fibers run parallel to these curves. As a result, stresses are balanced. Fabric is somewhat elastic, but, properly designed, it won't sag or creep.

Translucency is another principal advantage of fabric. Daylight, filtered through the woven yarns, is soft and even, eliminating the need for supplemental lighting. That can mean significant cost savings for energy, particularly for shopping malls, convention centers, and places where lighting needs are high. After dark, the fabric lets light out, creating a structure that glows in the night. Light transmittance varies according to the type of fabric and coatings and the number of layers, colors, and, of course, the position of the building in relation to the path of the sun and other structures.

The material's performance is not as impressive when it comes to R-values. A single layer has an R-value of about 1. This is improved with double or even triple layers, which add air spaces that help insulate. And low E films can be laminated onto the fabric layers. But when the total energy package is examined, it may be that fabric will save money.

That's because natural lighting, which virtually eliminates the need for electric lights, lowers energy costs and avoids heat gain from the lamps. The highly reflective surface of fabric also lowers the amount of heat gain from solar radiation, especially compared to conventional roofs.

This dovetails with the relatively new approach toward building services design at FTL Happold, where only the portions of rooms that are occupied by people are heated or cooled, and only during the times they are occupied, but that's another story.

INTRODUCING CECO'S NEW AND EXPANDED LINE OF STAINLESS STEEL DOORS AND FRAMES



DOORS:

Available in 18, 16, 14 or 12 gage

Available with 4 core options—Styrene (standard), Honeycomb (optional), Polyurethane (optional), Vertically Steel Stiffened (optional)

STAINLESS STEEL ALLOYS AVAILABLE:

Type #304 for standard enviroments

Type #316 for extremely corrosive environments



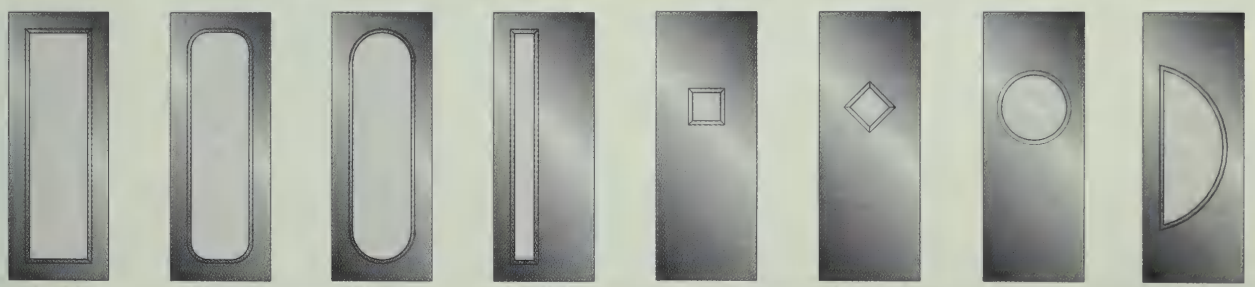
FIRE LABEL:

Underwriters Laboratories (UL) 20 minutes to 3 hours

APPLICATIONS:

High style architectural environments, commercial or institutional projects, pulp and paper mills, health care facilities, pharmaceutical plants, research laboratories, sanitation, food processing, water treatment, chemical plants, oil refineries, exterior in coastal areas.

DOOR STYLES AVAILABLE:



FULL GLASS SQUARE CORNER | FULL GLASS RADIUS CORNER | FULL GLASS ROUND TOP | NARROW LITE | SMALL SQUARE | SMALL DIAMOND | PORTHOLE | HALF CIRCLE

STAINLESS STEEL FINISHES AVAILABLE:



NO. 2D DULL (MILL) | NO. 4 BRUSHED (SATIN OR HAIRLINE) | NO. 4 DULL SATIN | NO. 8 MIRROR (POLISHED) | NON-DIRECTIONAL | RANDOM SWIRL

Ceco Door Products
A United Dominion Company

CIRCLE 49 ON INQUIRY CARD

750 Old Hickory Boulevard • One Brentwood Commons, Suite 150 • Brentwood, TN 37027 • (615) 661-5030; FAX (615) 370-5299 • www.cecodoor.com

CASE STUDY

Project: Burj Al Arab Hotel, Dubai
Architect: *W.S. Atkins & Partners, London*
Fabric: *Dyneon, Oakdale, Minn.*
Fabricator: *Skyspan Europe, Germany*

This is the kind of project architects dream of: a luxurious, spare-no-expense hotel and conference center on a man-made island in Dubai. Opened less than a year ago, the hotel features a brilliant white fiberglass and PTFE-coated vertical cloth membrane that's meant to resemble the billowing sail of a traditional Arabic sailing ship.

The 161,000-square-foot, two-layer screen covers the open side of the V-shaped steel-and-glass building, creating an atrium lobby. A more standard choice for this area would have been glass, but in the extreme desert conditions, this would have introduced heat and glare. The fabric provides a soft, milky light and lessens heat gain. At night, it is used as a gigantic projection screen onto which the faces of high-ranking guests are shown [MAY 2000, page 321].

The vertical installation may mark the first time that tensile fabric was used as part of the facade, says Michael Wolf, project manager for Skyspan. The application was more difficult to engineer than a typical horizontally applied tensile membrane. The fabricators, who also did the engineering, created a fabric model and used it for structural analysis and for cutting patterns.

The 650-foot-tall screen is divided into 12 fields averaging 7800 square feet each. Installing a single membrane for the whole area would have placed too much stress on the fabric. The fields are each supported by steel arches and pairs of steel rods that are also tied to the structure. The fabric was clamped to the arches at ground level, then the entire assembly was lifted into place and unfurled. The screen stops about 45 feet above the ground to allow for the steel-and-glass entry facade.





The coated Teflon fabric skin of the Burj Al Arab Hotel in Dubai is divided into 12 parts (left). The skin softens light in the hotel interior (right).

The desert heat and light will take a toll on the fabric's longevity, though the fabricators estimate that it will hold up for up to 50 years. The smaller individual fields, however, are more easily replaced than the entire assembly. *W.T.*

Proper design, engineering, material selection, and fabrication all work together to ensure a sound tensile-fabric structure. Since the industry is constantly changing with many new players, architects should check out a variety of fabric suppliers and structure fabricators to determine which company works best for them. The list below is not definitive; often suppliers will double as fabricators and vice versa. For more information, visit the Industrial Fabrics Association International's Web site at www.ifai.com.
Rita F. Catinella



Seaman was the supplier and Birdair the fabricator for the Roberta Bondar Park Pavilion, Ontario, by Guluga/Smedley/Mezzomo Architects.

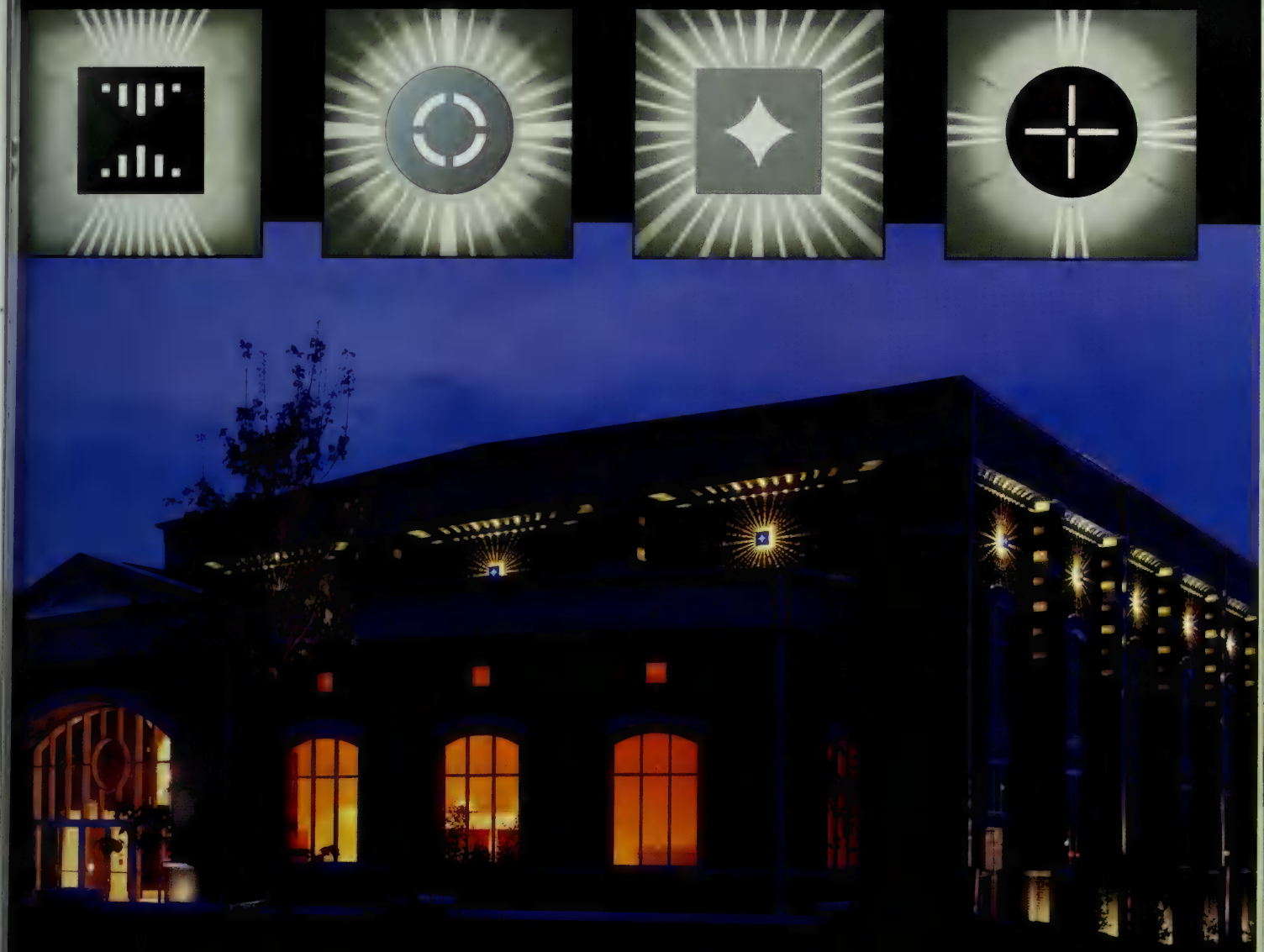
Fabric Suppliers

Anchor Industries Inc.
Evansville, Ind. 800/255-5552. www.anchorinc.com
Chemfab Corp.
Salt Lake City. 801/262-3654. www.chemfabcorp.com
Cover-All Building Systems
Saskatoon, Canada. 800/615-4777. www.coverall.net
Ferrari S.A.
Cedex, France. 33/04-7497-6649.
Hansen Weatherport Corp.
Olathe, Colo. 970/323-5932. www.weatherport.com
Intertape Polymer Group
Montreal. 800/565-2000. www.intertapepolymer.com
Losberger US LLC
Mooresville, Ind. 800/964-8368. www.losberger.com
Mehler Coating Fabrics Inc.
Charlotte, N.C. 704/527-7188.
Seaman Corporation
Wooster, Ohio. 800/927-8578. www.seamancorp.com
Snyder Manufacturing Inc.
Dover, Ohio. 330/262-1111. www.SnyderMan.com
Taconic
Petersburg, N.Y. 518/658-3202. www.4taconic.com
Taiyo Kogyo Corporation
Tokyo. 81/03–3719–37.
Universal Fabric Structures
Quakertown, Pa. 800/634-8368. www.ufsinc.com
Weatherhaven
Burnaby B.C. Canada. 604/451-8900. www.weatherhaven.com

Structural Fabricators

Advanced Structures Inc.
Marina Del Rey, Calif. 310/301-1984. www.asidesign.com
Birdair Inc.
Amherst, N.Y. 800/622-2246 www.birdair.com
Canvas Specialty
Los Angeles. 800/423-4082. www.can-spec.com
J&J Carter Limited
Bagingstoke Hampshire, U.K. 44/01256 8114. www.jjcarter.com
Landrell Fabric Engineering
Monmouthshire, U.K. 44/01291 6277 www.landrell.com
Permafab Pty Ltd.
Sydney, Australia. 61/02 9858 36.
Rainier Industries, Ltd.
Seattle. 800/869-7162. www.rainierindustries.com
Rubb Buildings Inc.
Sanford, Maine. 800/289-7822. www.rubb.com
Skyspan (UK) Ltd.
Wiltshire, U. K. 44/ 01722 331599. www.skyspan.com
Sullivan & Brampton
San Leandro, Calif. 800/257-5900. www.sullivanandbrampton.com
Tensile Designs International
Kansas City, Mo. 800/58-SHADE. www.tensiledesigns.com
Tentnology
Surrey, B.C. Canada. 800/663-8858. www.tentnology.com

LightShower™



ocation:
reater Atlanta Christian School's Fine and
erforming Arts Center

rchitect:
ohn Andrews Architect, Inc.

ighting Designer:
Michael Angelo Tortora, Newcomb & Boyd
ighting Design Group

hotography:
ieran Reynolds

VISA LIGHTING
An Oldenburg Group Company

8600 W. Bradley Rd., Milwuakee, WI 53224
800/788-VISA • www.visalighting.com

CIRCLE 50 ON INQUIRY CARD

Structural components and installation

Tensile-membrane structures are supported by masts, arches, or external trusses. The masts give fabric roofs their iconic peaks, which are typically steel, but may be aluminum if the structure is relocatable. Mast-supported structures are less expensive than the other two, but the spans are shorter and there are more interior columns. Arches allow larger spans but require greater structural gymnastics. External trusses allow a wide-open space but, once again, require more costly engineering and materials.



The William Younger Center Dynamic Earth Conference and Exhibition Center, Scotland.

Working with fabric requires some of a dressmaker's skills and sensibilities. At FTL Happold, models are handsewn using white panty hose and are supported with brass tubes, polyester threads, and Crazyglue. On the building itself, darts, seams, and other details are common. These are calculated and drawn by FTL Happold with special software and executed by the fabricators.

The bolts of cloth for actual construction come in varying widths, from about 6 to 14 feet. During design, much thought is given to creating a pattern that minimizes waste during the cutting process. The fabric may be cut with lasers, using CAD drawing files for guidance. Or it may be cut by hand, using templates and cutting equipment borrowed from the fashion industry. Fabric seams achieve full design loading, and vary in width from 1 to 3 inches wide, depending on fabric type and on wind and snow loading; they are made by RF (radio-frequency welding), or heat welding.

As well as being predesigned and pre-engineered, the entire tensile structure and its supporting structures are prefabricated offsite in factories. The fabric is assembled at the plant, put on a roll, and transported to the site, where it is unfurled into place.

Contractors, usually ironworkers, work with sheets that are as large as possible but can still be handled. Wind is a problem, according to Birdair's Radcliffe. "If winds are above 20 miles per hour, we won't install. It's like wrestling with a 10,000-square-foot kite." During installation, the fabric is tethered with a guideline.

The only work done on-site is the foundations. Masts are connected to these via pins; some play is necessary to allow the mast to move slightly to accommodate loads. The assembly is stayed in several directions with cables. Replacing the fabric on a permanent structure, when it is worn, is a significant undertaking that should be considered during design. Generally the portion of the building adjacent to the tensile structure will have to be closed during the replacement time.

Try it, you'll like it

Fabric is not for everyone; nor is it for every building type. But as Dalland says, "A space with a fabric roof or wall invariably becomes the premium space within a building. Yet, despite these advantages, most architects have never touched a fabric structure." He adds, "I bet most secretly want to." ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "Designing with Structural Fabrics" using the learning objectives provided.
- Complete the questions below, then check your answers [page 226].
- Fill out and submit the AIA/CES education reporting form [page 226] or file the form on ARCHITECTURAL RECORD's Web site at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

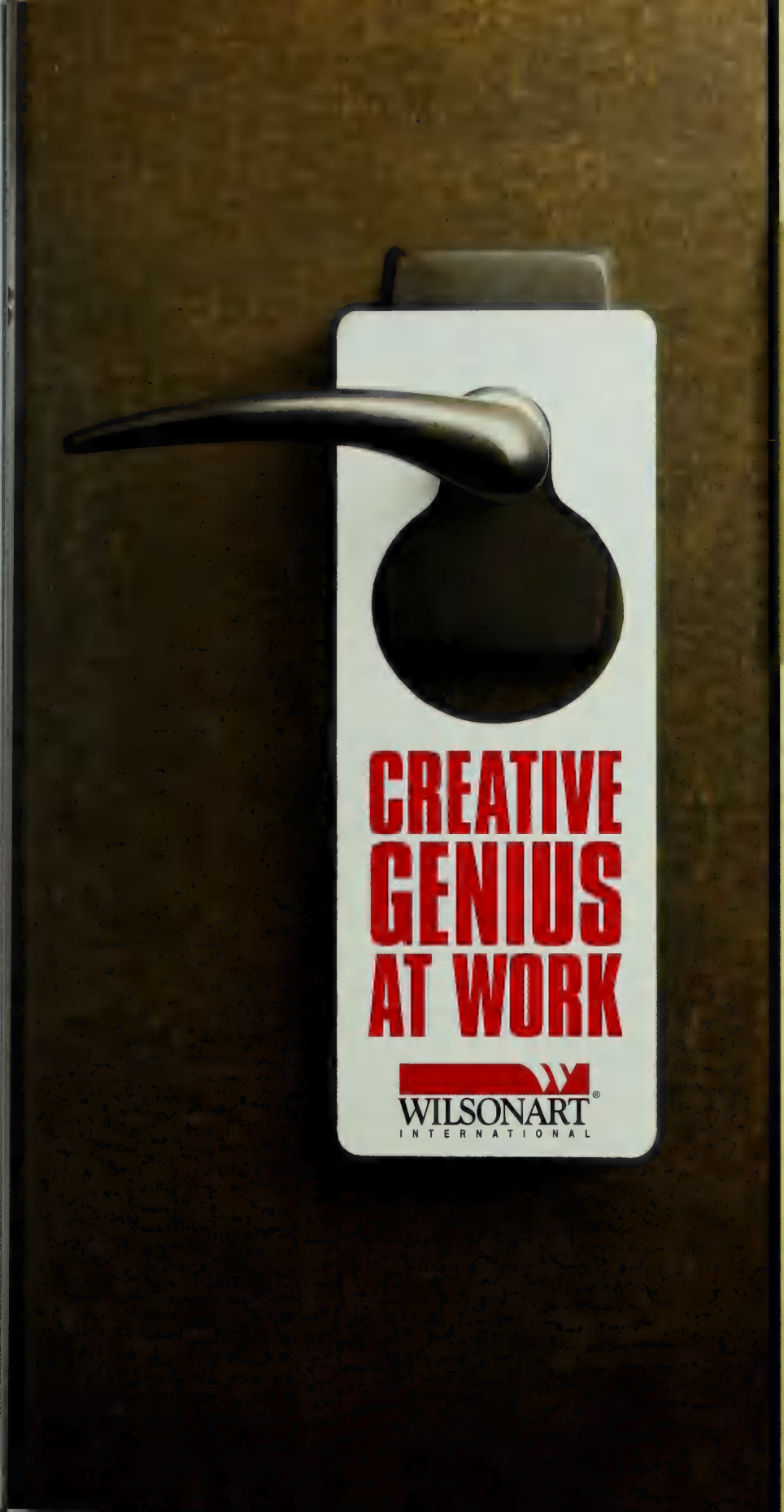
1. What advantages do fabrics offer to a building's design?

2. Why are fabrics used more in other countries than in the United States?

3. Fabric is used for which elements in a building?

4. Structural fabrics are made of what fibers and coatings?

5. How are fabric structures supported?



You're a smart one. Always open to the latest in design solutions.

Like our new Architectural Door Collection. These 50 distinctive designs marry all the best features of Wilsonart® Laminate – durability and ease of maintenance – with the latest advances in design, printing and finish technology.

The result is an incredible series of laminates that, more than any other material, give your projects the performance features you demand and the aesthetics you desire.

To express your creative genius, call 1-800-433-3222 and ask for the Architectural Door Sample Kit.

CIRCLE 51 ON INQUIRY CARD

Pattern shown: Windswept Bronze (4794-60)

10800/TRU
BuyLine 9143

NEW DESIGN! Installs even faster!

EXCEEDS ADA REQUIREMENTS



Lav Guard Classified by Underwriters Laboratories, Inc.® in accordance with ADA ARTICLE 4.19.4.2 2FF

Affordable... *and a Snap* to install!*

LAV GUARD by TRUEBRO

The *truly* better, federally mandated solution to **under-sink protection** that...

- **TRUE**-ly meets and exceeds ADA regulations
- **TRUE**-ly is ASTM tested and certified by *UL*, *IAPMO*, and the City of Los Angeles
- **TRUE**-ly is affordable for any budget
- **TRUE**-ly is quick and easy to install and fully rotatable
- **TRUE**-ly is tough enough to stand up to commercial traffic
- **TRUE**-ly is anti-microbial
- **TRUE**-ly makes an attractive and professional installation

Proudly Made in the U.S.A.

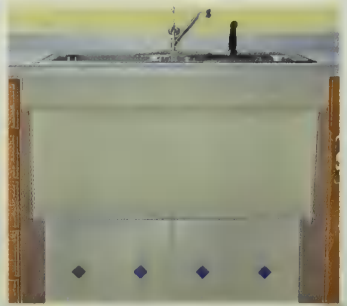
To get all the facts request your FREE brochure today! There's no obligation... and you'll quickly see why TRUEBRO is *truly better!*

LAV GUARD™
UNDERSINK PROTECTIVE PIPE COVERS

Also available...



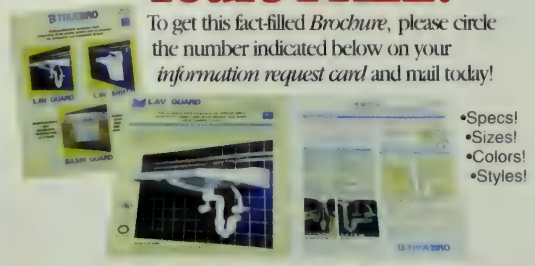
LAV SHIELD™
LAVATORY PROTECTIVE ENCLOSURES



BASIN GUARD™
UNDERSINK PROTECTIVE ENCLOSURES

Yours FREE!

To get this fact-filled *Brochure*, please circle the number indicated below on your *information request card* and mail today!



- •Specs!
- •Sizes!
- •Colors!
- •Styles!

TRUEBRO
MAKING AMERICA ACCESSIBLE

7 Main Street • P.O. Box 440 • Ellington, CT 06029
Tel 800-340-5969 • www.truebro.com

CIRCLE 52 ON INQUIRY CARD



FOLLANSBEE'S

ENVIROMETALS® TCS II® AND TERNE II®

roofing metals coated with a revolutionary new alloy that enhances their corrosion resistance even in chemically-polluted and marine atmospheres

Drawing on more than a century of experience in producing roofing metals, Follansbee has now created a new alloy which is environmentally sensitive and enhances a roofing metal's corrosion resistance in severe atmospheres such as those encountered in chemically-polluted and marine environments.

Developed by Follansbee over a 7-year period of testing in laboratory and field conditions, the new ZT™ alloy does not rely on the sulphur content of the atmosphere to develop its protective and attractive gray patina. The ZT alloy is oxygen-reactive, therefore, it develops its patina under all ambient conditions–rural, industrial or marine.

Follansbee now offers TCS II and TERNE II, roofing metals coated with lead-free ZT alloy. Many prominent architects are already specifying these Follansbee roofing metals, and feel as we do, that they are roofing products which meet the demanding construction needs of the coming century.

We will be happy to send you complete information on TCS II and TERNE II and the new ZT alloy. Call us toll-free, 1-800-624-6906.

Creating outstanding roofing metals for more than a century

FOLLANSBEE®

FOLLANSBEE STEEL • FOLLANSBEE, WV 26037

FAX 1-304-527-1269

Visit us on the Web at: [illegible]

Our E-Mail address: [illegible]@follansbee.com

CIRCLE 53 ON INQUIRY CARD

There Are Windows And There Are Mirrors. We Don't Get Them Confused.



Ordinary glass



AMIRAN anti-reflective glass

AMIRAN® anti-reflective glass is so clear, it's like it's not even there. Mirrors are great for seeing yourself. They're not so great for seeing what's on sale. Or what's inside a zoo, museum, restaurant – anyplace where visibility counts. That's when you need Amiran anti-reflective glass. For years it's been virtually eliminating glare to as little as 1%. There are other advantages, too. Amiran saves money. It lets more light pass through than regular glass, so lighting fixture and energy costs are lower. And only Amiran has a 15-year track record for reliability. Amiran anti-reflective glass is available in tempered, laminated and insulated glass panels for delivery anywhere in the U.S. Because if you want a window, we think you should get a window. Let us put some Amiran in your hands so you can see the dramatic difference for yourself. Call 914-378-3839 or write Schott Corporation at 3 Odell Plaza, Yonkers, NY 10701 for samples. For more details, visit www.schottglass.com/amiran.htm.

SCHOTT
glass made of ideas

© 1999 Schott Corporation. ® Amiran is a registered trademark of Schott Glas, Mainz, Germany

CIRCLE 54 ON INQUIRY CARD

Solarwall Captures Sunlight to Warm Buildings and Save Energy

Two main factors currently impede the integration of renewable-energy technology with architecture. First, technology costs are high in relation to energy prices. Second, photovoltaics in most instances cost too much relative to their electric output; solar collectors are most often merely building appendages.

The transpired solar collector—Solarwall—begins to address these concerns in a simple, direct manner. Since the technology is integrated into the building envelope, it is particularly cost effective for cold-climate buildings with heating loads.

Solarwall is a perforated metal cladding fastened to metal channels—to create a plenum—over a typical stud or masonry wall. Solarwall panels absorb the sun's energy, with conventional fans drawing air through the holes to capture heat. This plenum air is then ducted into the building's air-distribution system, where Solarwall preheats intake air, facade, and mechanical systems simultaneously.

Calculating Solarwall's "porosity"—hole spacing and size for proper draw—requires rigor, but the technology is surprisingly simple. Good solar access is a must and cladding color affects performance, black being the most effective. Depending on these factors and utility rates, energy savings can recapture Solarwall costs in 3 to 10 years (longer in retrofits).

The Federal Express distribution center in Colorado is one noteworthy example. Entering trucks foul air—requiring higher than average air exchanges—with open doors also contributing to substantial heat loss. A 5,000-square-foot Solarwall installation saves approximately $11,000 a year in natural gas costs by preheating incoming air. Additionally, Solarwall displaced conventional cladding, up-front savings that brought down initial costs.

Solarwall has made great inroads in warehouse and factory buildings, as its metal cladding is a natural fit with these building types. But recently architects and clients are expanding the product's range. Minneapolis' new Downtown School, by Cuningham Group, features a 2,100-square-foot Solarwall installation, saving $4,000 annually in energy costs. On a typical winter day, Solarwall preheats air by 30 degrees. The technology is also being used on a forthcoming classroom facility at the University of Wisconsin, Green Bay, an HOK project.

That Solarwall is effective both as a simple mechanical penthouse cladding and as a more ambitious architectural element points to its inherent flexibility and adaptability. Certainly the technology merits further consideration. As Solarwall enters its second decade of use, it challenges our preconceptions of renewable-energy technologies and their relationship to architectural form and building fabric. *Todd Willmert*

Minneapolis' New Downtown School (the Solarwall is the black area).



Green games: Give earth a sporting chance

The Sydney Olympics, which will run from September 15 to October 1, have gone further than any other Olympics in addressing environment concerns. A unique collaboration between Greenpeace International, the environmental firm Manidis Roberts, the Rocky Mountain Institute, and developer Lend Lease/Mirvac has resulted in a car-free, solar-powered Olympic village that utilizes eco-friendly materials and showcases cutting-edge green technologies from around the world.

Not all the goals outlined in the Environment Guidelines for Sydney were realized, however. The realities of constructing a vast project with extremely tight deadlines and bottom-line considerations made this a remarkable but limited success.

Olympic Athletes Village is the world's largest solar suburb, with 665 homes utilizing solar-powered electricity through a grid-connected system and solar hot-water heating. After the games, these homes will be "recycled" and sold to the public. The area will become Newington, a village organized into three new urbanist neighborhoods.

Solar panels are also being used on the Olympic Stadium, SuperDome, and Regatta Centre. These panels, along with innovative building design, will significantly reduce energy consumption, lowering operating costs and decreasing CO_2 pollution.

The use of the toxic plastic PVC has dropped dramatically in all Olympic venues, and safer alternatives for plumbing, cabling, and other fixtures are in place. PVC produces hazardous chemicals, including the highly poisonous dioxin, which is linked to numerous human health problems, including birth defects, cancer, and disruption of the hormone system.

New train lines have been built to make transportation less polluting and more efficient and accessible, making this the first car-free Olympics with almost all spectators using public access.

Other environmental successes include the development of a habitat for two threatened frog species, the preservation of a remnant of virgin forest, and the guarantee of a significant reduction in the refrigerants that deplete ozone or contribute to global warming (CFCs, HCFCs, and HFCs).

Greenpeace is campaigning to ensure that official corporate sponsors to the Olympics take up the Environmental Guidelines adopted by Sydney. These guidelines offer sponsors the chance to show their environmental commitment by reducing waste, using alternative energy, and/or converting to environmentally safe refrigerants. *Jane K. Kolleeny*


NO, ROME
WASN'T BUILT
IN A DAY.
[WITH THIS MACHINE IT COULD TAKE TWO.]
DELL
MENU
VIDEO
intel inside
pentium III



Flat Panel Monitor Sold as an Upgrade.

Empires come and go. And, what once was possible in months, is now required in days, or even hours. Not to worry. Because here's a workstation that can leap killer deadlines faster than you can say "Centurion." The Dell™ Precision™ workstation's RDRAM technology and dual processor capability provides architects and engineers the bandwidth and refresh rate to perfect their designs quickly—even up to the last minute. And a full range of industry-leading graphics cards delivers impressive 2D and 3D performance that breathes digital life into your creations. Just think of what those early architectural visionaries might have accomplished if they had a workstation like this.

DELL™ WORKSTATIONS:

DELL™ PRECISION™ 220

- Intel® Pentium® III Processor at 733MHz (up to 933MHz)
- Dual Processor/RAID Capable
- 64MB RDRAM (up to 512MB)
- 10.2GB[5] 7200 RPM EIDE HD (146GB Internal SCSI Storage Capacity)
- 17" (16.0" vis) M781 Monitor
- 32MB 4X AGP NVIDIA TNT2 M64 Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$1669 E•VALUE CODE 89150-490916

BUSINESS LEASE: $46/MO., 48 MOS.[11]

ASK ABOUT OUR AIA DISCOUNT.

DELL™ PRECISION™ 420

- Intel® Pentium® III Processor at 733MHz (up to 933MHz)
- Dual Processor/RAID Capable
- 128MB RDRAM (up to 1GB)
- 10.2GB[5] 7200 RPM EIDE HD (220GB Internal SCSI Storage Capacity)
- 17" (16.0" vis) M781 Monitor
- 32MB 4X AGP Matrox G400 Max Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$2359 E•VALUE CODE 89150-490923

BUSINESS LEASE: $65/MO., 48 MOS.[11]

ASK ABOUT OUR AIA DISCOUNT.

DELL™ PRECISION™ 620

- Intel® Pentium® III Xeon™ Processor at 866MHz (up to 1GHz)
- Dual Processor/RAID Capable
- 128MB ECC RDRAM (up to 2GB)
- 9GB[5] 10K RPM Ultra3 SCSI HD (220GB Internal SCSI Storage Capacity)
- 17" (16.0" vis) M781 Monitor
- 32MB 4X AGP Matrox G400 Max Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$3649 E•VALUE CODE 89150-490936

BUSINESS LEASE: $101/MO., 48 MOS.[11]

ASK ABOUT OUR AIA DISCOUNT.

SYSTEM OPTIONS

Graphics Cards:
- 32MB 4X AGP NVIDIA TNT2 M64
- NEW 32MB 4X AGP NVIDIA GeForce2 GTS
- 64MB 4X AGP GLoria® II Pro (420 & 620 only)
- Intense3D™ Wildcat™ 4110 Pro (420 & 620 only)
- IEEE 1394 Adapter Card

Monitors:
- 17" (16.0" vis) P780 FD Trinitron® Monitor
- 19" (17.9" vis) P991 FD Trinitron® Monitor
- 21" (19.8" vis) P1110 FD Trinitron® Monitor
- 15" (15.0" vis) FP1501 Flat Panel Monitor

Operating Systems:
- MS® Windows® 2000 Professional
- Red Hat® Linux™ (420 & 620 only)

DELL.COM™

USE THE E-VALUE CODE TO GET EXACTLY WHAT YOU WANT | **800.873.3719** | WWW.DELL.COM

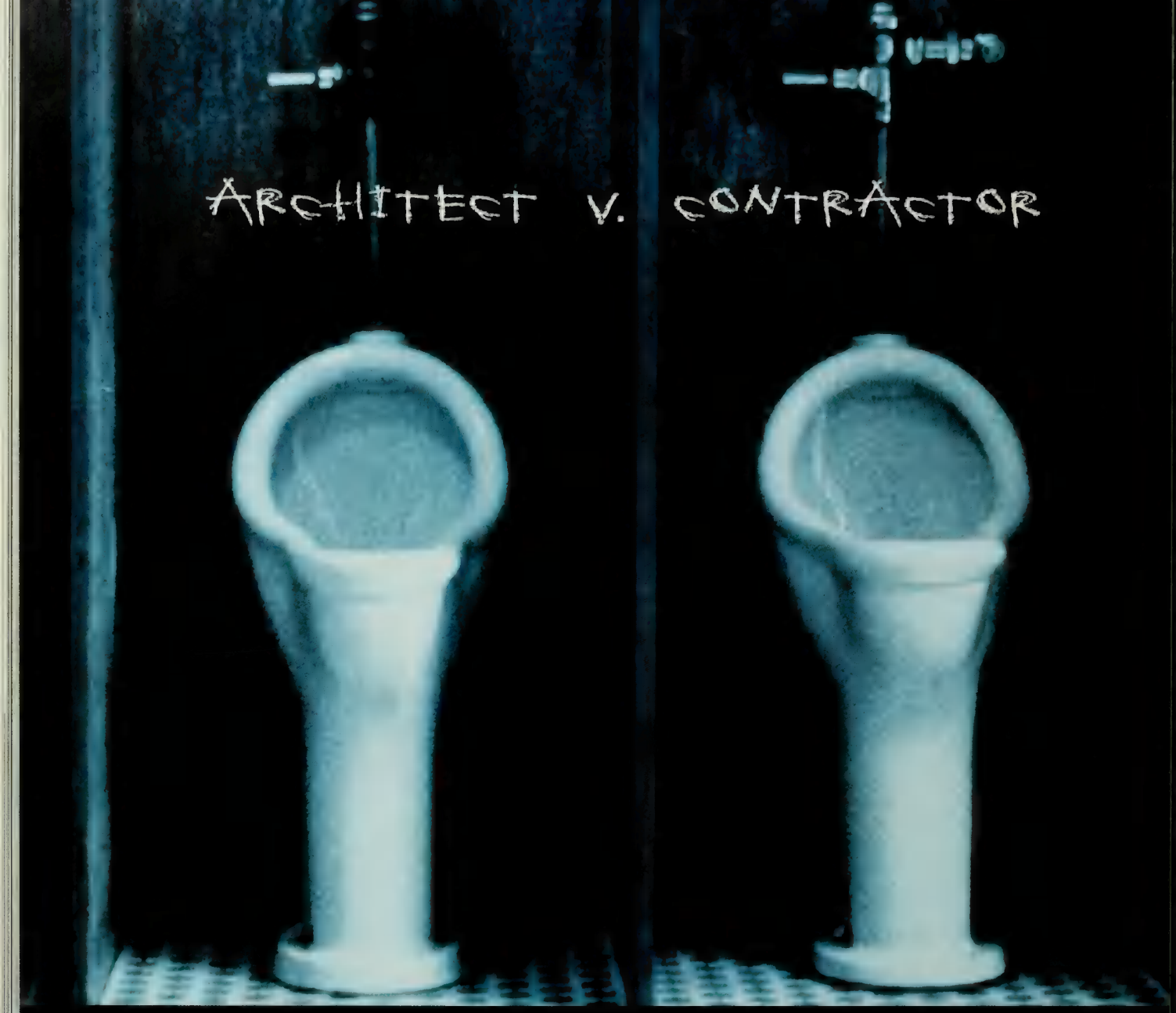
VALUE™

USE THE POWER OF THE E•VALUE CODE. Match our latest technology with our latest prices. Enter the E•VALUE code online or give it to your sales rep over the phone. www.dell.com/evalue

Dell recommends Windows 2000 Professional for business.

Call: M-F 7a-9p | Sat 10a-6p | Sun 12p-5p CT | Canada: 800-839-0148 | Mexico: 001-877-269-3379 | GSA Contract #GS-35F-4076D

Prices, specifications, and availability may change without notice. Taxes and shipping charges extra, and vary. Cannot be combined with other offers or discounts. U.S. only. [2]For a copy of our Guarantees or Limited Warranties, write Dell USA L.P., Attn: Warranties, One Dell Way, Round Rock, Texas 78682. [3]Service may be provided by third party. Availability varies. Technician will be dispatched, if necessary, following phone-based troubleshooting. [5]For hard drives, GB means 1 billion bytes; accessible capacity varies with operating environment. [11]Business leasing arranged by Dell Financial Services L.P., an independent entity, to qualified customers. Lease payments based on 48-month 10% purchase option lease and do not include taxes, fees and shipping charges. Subject to credit approval and availability. Lease terms and pricing subject to change without notice. Intel, the Intel Inside logo, and Pentium are registered trademarks and Intel SpeedStep, Pentium III Xeon, and Celeron are trademarks of Intel Corporation. MS, Microsoft, BackOffice, IntelliMouse, Windows NT, and Windows are registered trademarks of Microsoft Corporation. Trinitron is a registered trademark of Sony Corporation. ©2000 Dell Computer Corporation. All rights reserved.



End the contest with Viecon.com

Introducing Viecon.com by Bentley. The only project extranet to successfully bring building professionals together. Replacing confrontation with collaboration. Inefficiency with productivity. Improving workflow and profitability. The only Internet solution robust enough to relieve the industry of the multi-billion dollar E/C/O communication gap. So you see things eye to eye for a change. All backed by Bentley's commitment to superior technology. Viecon.com. Work together.

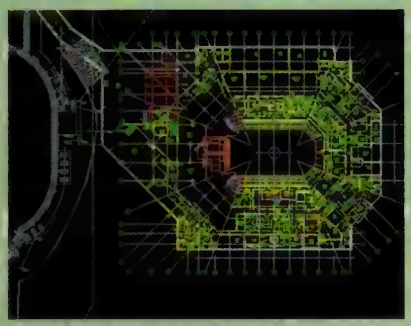
viecon.com
by Bentley

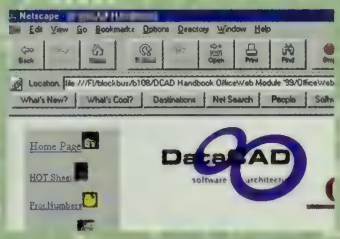
CIRCLE 55 ON INQUIRY CARD

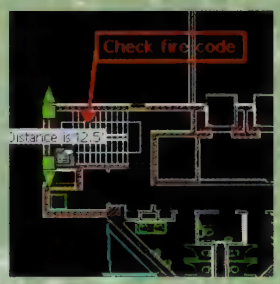
© 2000 Bentley Systems, Incorporated. Bentley is a registered trademark and Viecon is a trademark of Bentley Systems, Incorporated or Bentley Software, Inc. BAA006990-1/0001 7/00

COMPUTERS









The editors at RECORD recently had a serious discussion about whether it was appropriate to continue calling these pages "Computers." Such a generic-sounding title does not seem to capture the great variety of subjects and the exciting technical innovations covered in these pages. Not one of the stories in this issue is simply about the boxy beige machines with monitors sitting on top of them. In the end, however, we came to realize that the only thing the stories have in common *is* the beige box.

Consider the following: In the first story, Kathleen Maher describes the use of project extranets, storage spaces on the Internet containing information that can be accessed, used, and modified by the various members of project teams. Extranets offer quick site setup and ease of use, even for people who are not technically adept.

In our second feature, Evan Shu explores how easy it is to adapt Web page development software to a variety of creative uses in the architect's workplace. He also suggests ways in which browsers can be used offline to create snappy presentations and beat the blahs that inevitably hit everyone burnt out on Powerpoint. He shows how browsers can be adapted for the creation of effective office and reference manuals, handbooks, and detail libraries.

B.J. Novitski's Digital Architect looks at several of the amazing devices that have been developed to help disabled designers, including one-handed keyboards, digital recorders with advance voice recognition, and an infrared mouse emulator that can be clipped to a pair of eyeglasses.

There is not a word about beige boxes in these stories. We are still mulling over our title, but for now, computers will have to do. It's what such diverse material has in common. *Charles Linn, AIA*

Digital Briefs
By Jane F. Kolleeny

Project Extranets
By Kathleen Maher

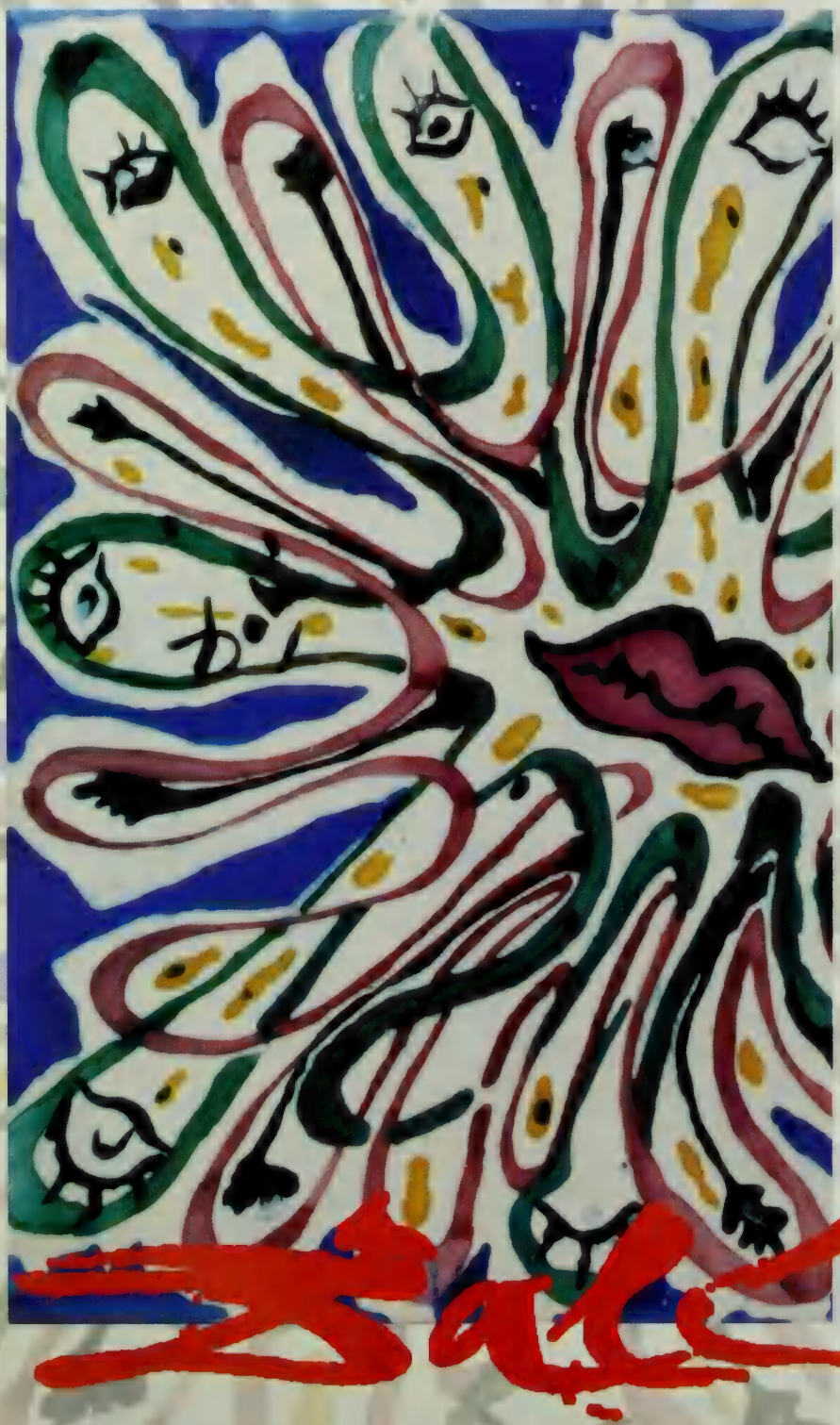
Architects Explore Uses for Innovative Offline Web Pages
By Evan H. Shu, AIA

Digital Architect:
By B.J. Novitski

Digital Reviews
By Jerry Laiserin, FAIA

Tile of Spain

Autographed With Excellence



Throughout history, artists like Spain's Salvador Dalí have added new dimensions to their unique interpretations with the creative use of ceramic tile. Like Dalí, the tile manufacturers of Spain are regarded as masters of their craft.

For centuries, they have combined a history of craftsmanship and quality with forward-thinking technologies. Today, they continue to set industry standards and develop the techniques and products of the future, from handmade to high-tech.

No other ceramic tile offers the prestige of the finest European products at such attractive price points. Tile from Spain delivers quality, service, and a stylish array of elegant designs and rich textures, priced to enhance profitability.

When it comes to floor and wallcovering options, the mark of excellence to look for is "Made in Spain".



For more information:
Tile of Spain Center, 2655 Le Jeune Road,
Suite 1114, Coral Gables, FL 33134
Phone: 305.446.4387; Fax: 305.446.2602
E-mail: buzon.oficial@miami.ofcomes.mcx.es
Web Site: www.tilespain.com

Image of ceramic tile by Salvador Dalí courtesy of The Salvador Dalí Museum, St. Petersburg, Florida.

TILE OF SPAIN

CIRCLE 56 ON INQUIRY CARD

Digital Briefs

The first American virtual reality theater opens in Iowa • Apple unveils its next-generation operating system at Macworld Expo



The maze demonstrates the photo-realistic visualization of an architectural model (far left). The Miller project is a library of opportunities to construct and reconstruct famous buildings (center and right).

Major advances in virtual reality technology

Iowa State University in Ames has created the first virtual reality theater in the United States, designed to immerse the user in images and sound. Opened on June 19, C6, as it is called, "is the first wireless, six-sided virtual reality theater," according to Jim Bernard, director of Iowa State's Virtual Reality Applications Center (VRAC).

Virtual reality uses computer images and sound to create environments that can be experienced as "real" by the user. Virtual reality technologies include head-mounted displays, virtual reality desks, and virtual reality rooms. Traditional cabling for gloves and headsets, essential tools that provide perspective and allow user interaction with images, will be replaced by wireless systems that will give users of C6 an unprecedented level of freedom within its walls.

"By going wireless, we can provide full motion so you are really immersed in data," said Carolina Cruz-Neira, assistant professor of electrical and computer engineering at Iowa State and associate director of VRAC. "When you are in there you will forget which wall is the door." Researchers will be able to walk inside buildings that no longer exist. "It will provide full, look-around capabilities," Cruz-Neira further explained. "With architectural models like the Notre Dame cathedral, you will be able to look up and see the paintings and designs on the ceiling."

C6 is a 10-by-10-by-10-foot room of workable space. High-resolution color images will surround the user via six rear-projected high-intensity projectors. Four wall projectors provide images directly on the surfaces. The ceiling and floor projectors will bounce images off mirrors before reaching the surface. The facility will use SGI Onyx2 computers running special software to create simulations, produce sounds, track feedback, and generate images. Six Barco projectors provide real-time 3-D images on the display surfaces. Ascension Technology's wireless trackers allow users to interact with the virtual world.

Iowa State will continue to operate its existing VR facility, the C2, and will link the two facilities to explore distributed virtual reality. "This will allow researchers in two or more different facilities, which could be located in different places anywhere in the world, to share their experiences and help develop solutions," says Cruz-Neira.

Many VR applications are already in use at VRAC, including a virtual library that provides an immersive environment for walking through and seeing the inside of famous and historic buildings in their original or intended form and structure. Another application is the Virtual Architecture Design Tool, called VADeT, which creates an immersive environment for interactive architectural design and enhances conventional sketching on paper. The Maze incorporates effects such as animation, lighting, and reflection, which are commonly possible only in frame-by-frame rendering, to create real-time visualization capabilities.

For more information, visit their Web site at www.vrac.iastate.edu/research/architecture. *JFK*

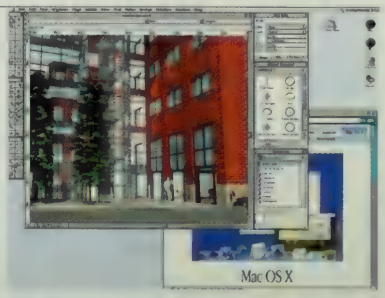
Apple's next big thing

Apple's next-generation operating system was announced at the Macworld Expo in New York, July 18–21. Called the Mac OS X, the system will be released in the first quarter of 2001 and is described by Apple as "not just another pretty face, but an industrial-strength modern operating system."

Sean Flaherty, of Nemetschek North America, stated, "Mac OS X is projected as much more robust and powerful than previous versions, and I look at this as being a new foundation release, featuring increased memory protection and preemptive multitasking, which will be favored by VectorWorks Mac users."

Nemetschek North America today announced its intention to support Mac OS X fully by releasing a Carbon native (a Mac program that's been updated for Mac OS X) version of VectorWorks within 60 days of the launch of OS X. Although now cross platform, MiniCAD/VectorWorks, the company's flagship product, originated on the Mac and has gone on to becoming the bestselling Mac CAD program.

The preview version of Apple's next-generation operating system includes the final API specifications required by developers to complete upgrades of their applications to take full advantage of Mac OS X's new capabilities. Mac OS X Developer Preview 4 also includes a version of Microsoft's Internet Explorer 5 specifically for Mac OS X, and support for the Java 2 Platform.



The MacIntosh OS X breaks new ground.

"With this Preview release, developers now have everything they need to make killer applications for Mac OS X," said Steve Jobs, Apple's CEO. "We are incredibly pleased at the support we are getting from many of the world's best software developers for Mac OS X, the future of the Mac platform."

For more information, visit www.apple.com/macosx. *Jane F. Kolleeny*



"Beautiful buildings are... works of art using the best technology."

Frank Lloyd Wright

Bidcom

Build Better.

www.bidcom.com

Bidcom, Inc. helps companies manage risk, improve profitability and complete building projects on time. Bidcom's Suite of e-Business Services are delivered through a comprehensive, integrated online environment that allows building industry professionals to communicate and collaborate, manage business processes, conduct e-commerce and access valuable industry content. Bidcom's easy-to-use services support all participants throughout the complete lifecycle of multiple building projects, including: owners and real estate developers; architects and design professionals; general contractors and sub-contractors; and facilities managers.

© 2000. All rights reserved. Bidcom and the Bidcom logo are trademarks of Bidcom, Inc.

CIRCLE 57 ON INQUIRY CARD

Project extranets give design professionals a reason to get wired

By Kathleen Maher

Project extranets are hot and getting hotter. Recently, their usefulness for architectural projects has soared. At the A/E/C Systems show in June, for example, the number of exhibitors offering extranet services had tripled from two years ago. The reasons are simple: the technology allows architects, designers, and engineers working in-house to communicate easily with outside contractors and to retrieve information when at home or in the field.

Essentially, a project extranet is a designated storage space on the Internet containing project-related information that can be accessed and modified electronically by project members. New products are continually being developed to facilitate more efficient project management online. Because extranets are located on the Internet, and therefore external to a particular office, the information they contain can be made available to any designated team member at any geographical location.

Mike Hnastchenko, director of technology at Ellerbe Becket in Minneapolis, and an enthusiastic proponent of project extranets, enjoys the immediacy that project extranets facilitate. "We have projects in Dubai and China and we can communicate across time zones," he says. He feels that he is working more closely with his colleagues spread out all over the world.

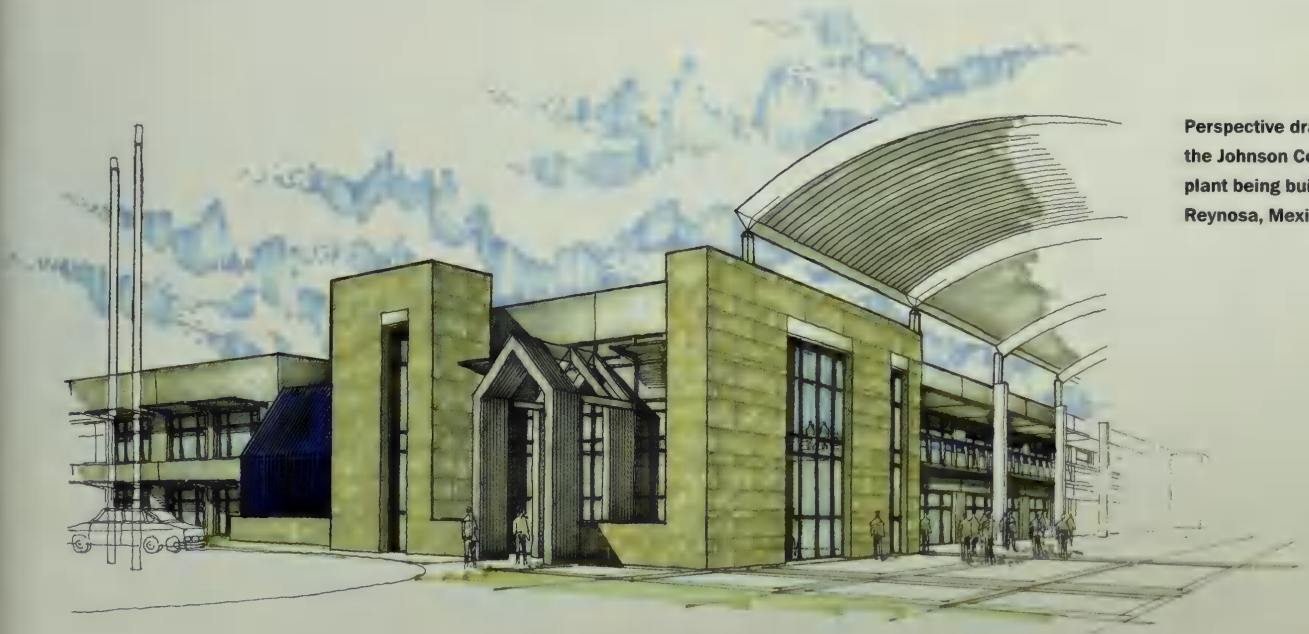
Kathleen Maher, formerly editor-in-chief of Cadence *magazine, is now an analyst at Jon Peddie Associates. She can be reached at www.jpa.com.*

According to Hnastchenko, those who take advantage of the technology will be able to communicate more efficiently and streamline their processes; those who don't will be left behind.

With a staff of 800 employees scattered among 11 offices around the world, Ellerbe Becket began exploring project extranets more than three years ago in order to communicate more efficiently with design team members inside and outside the firm. Ellerbe had been using FTP (file transfer protocol), a function built into the Internet that lets users set up a mutually available site on the Internet from which files can be downloaded. Setting up an FTP site requires effort on the part of site administrators, and special software is needed to download files. "The job gets done," says Hnastchenko about FTP, "but administration is clumsy, setting up access is clumsy, and the interface is very basic."

Ellerbe Becket first investigated several different companies offering extranet-hosting services, but Hnastchenko came to believe that standardizing on one was an absolute requirement. "If you keep experimenting," he said, "it's a training nightmare for your users and it doesn't promote collaboration." Instead, he said, "everyone will be using something different, the very antithesis of what the technology was designed to accomplish."

An AutoCAD house with a long relationship with Autodesk, Ellerbe Becket became involved in the development of Buzzsaw, Autodesk's project extranet company, and is now a Buzzsaw customer.



Perspective drawing of the Johnson Controls plant being built in Reynosa, Mexico.

Ellerbe Becket is redesigning its own Web site to link with Buzzsaw, thereby enabling one-stop communication for project members accessing Ellerbe Becket's site.

The architects are pleased with Buzzsaw's ease of use. Project members have no trouble accessing the site, even if they are not technically adept. Even more important, the project extranet sites are simple to set up. Site administrators can sign on for free, select a password, download component software that's invisible to users, and set up a site in minutes. In contrast, other project extranet companies often require an architectural firm to register, create an account, then wait to be notified that it can set up a site. Worse, in some cases the notification process has to be repeated every time a new user is added to the list of project participants.

"IT'S JUST NOT REALISTIC TO EXPECT EVERY PARTICIPANT IN A PROJECT TO RELY ON A PROJECT INTRANET."

Buzzsaw can offer this quick setup because it charges according to the amount of storage used and gives customers up to 100 Mbytes free. The added layer of administration required by other extranet companies comes from the necessity of setting up an account and some kind of payment plan from the start. Thus, though many projects can easily use many more than 100 Mbytes, the real attraction to Buzzsaw's free storage is that it allows immediate initial setup, so architects and other team members can get to work right away.

Setting up with Buzzsaw, however, is not always smooth sailing. Ellerbe Becket, for example, wanted all their projects up and running on Buzzsaw as soon as possible. Hnastchenko therefore tried to transfer all 800 users associated with the firm to the Buzzsaw site at once. It crashed. Subsequently, the Buzzsaw team worked with Hnastchenko to develop tools that enabled him to make the transfer, which is now trouble-free.

Ellerbe Becket relies on Buzzsaw most heavily in the design phase of an architectural project. According to Hnastchenko, this is because architects and engineers are generally comfortable with the technology, and the greatest need for collaboration occurs in the early stages of a project. During design, the extranet is used primarily for drawing file exchange and review. The system accommodates all documents that normally accompany a project. When files are uploaded to a Buzzsaw site, team members are sent an E-mail notifying them that there's new information online. Requests can be made to review, mark them up, make comments, and so on. It's easier to keep track of drawing revisions on the extranet than in earlier communication systems—such as simply making a file available on an FTP site or sending it back and forth via E-mail—because the dates, times, and documentation are an integral part of the Internet system. At the end of a project, the documents can be stored on a CD as a permanent record.

When it comes to the construction phase of a project, Ellerbe Becket still relies on the more traditional, paper-based methods of communication. "It's just not realistic to expect every participant in a project to rely on the project extranet," Hnastchenko says. "For example, you can't expect the carpet installer to be on the system. As you get further down the spectrum in a project, some of the efficiencies diminish." Stereotypically, people involved in the construction phase of projects have are not as technologically adept.

A 450-person firm with headquarters in Houston, 3D/International (3D/I) enjoys being on the cutting edge of technology. The company experimented with project extranets and, in fact, built its own extranet sites for individual projects. But 3D/I, like Ellerbe Becket, relies on AutoCAD and therefore gravitated toward Buzzsaw. Vice President of Industrial Development Alvaro Rizo-Patron finds that Buzzsaw provides a simpler solution that lets the firm pick and choose the features it needs while reducing the administrative burden that comes with building and maintaining in-house sites.

Unlike Ellerbe Becket, however, 3D/I finds project extranets most helpful in the construction phase of a project. 3D/I specializes in a project-delivery method known as "bridging," in which the architectural firm acts as a representative of the owner: it hires outside contractors and assumes responsibility for overall project management.

The architecture firm began using project extranets to communicate with Mexican contractors during the construction phase of the Johnson Controls automotive systems division plant, a 186,000-square-foot project located in Reynosa, Mexico (see sidebar). The architects relied on the firm's internal systems during the earlier phase of this project but found Buzzsaw to be extremely helpful when long-distance communications became necessary between the construction

Extranet Web sites abound

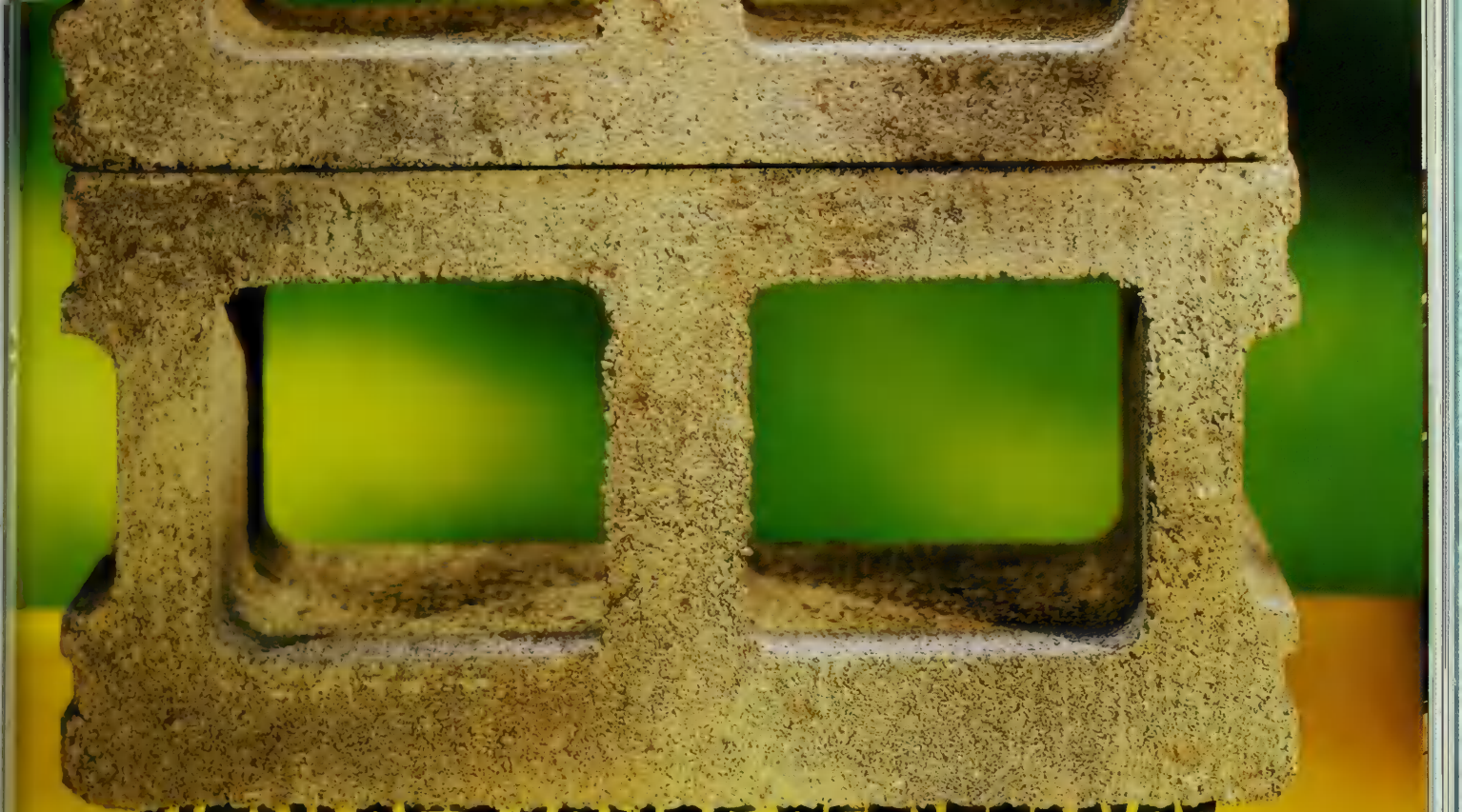
The number of companies offering services falling under the heading of project extranets has multiplied geometrically. It's been estimated that there were about 30 extranet companies at A/E/C Systems in 1999 and this year the number has risen to 150. RECORD contributing editor and consultant Jerry Laiserin, FAIA, who has been studying the field, says that there are as many as 600 companies that fall under the broad heading of extranet services. They cannot all survive. Next year, will there be 250 companies, or 75, or 25?

So far, architectural firms are taking advantage of the most basic services, such as file exchange. There might be some purchasing, some specifying, and some project management being done online, but how do these new services interface with the processes already operating in-house? Furthermore, some of the same problems, resistance, and inertia that have traditionally plagued various forms of project management will also plague the more advanced services offered by project extranets.

Architects and engineers, already resistant to process-control measures, are not likely to welcome these systems simply because they're on the Internet, but they do value the ability to exchange files, as well as file viewing and mark-up.

Project extranets have an advantage in their accessibility and the universality of the Internet. It's easier for teams from different companies to access a central site using the Internet browsers they're already comfortable with. Also, it's easier to sample a subset of services. Extranet companies offering these services will learn from their customers. Companies that can tailor their services to the ways in which their customers use the basic features of project extranets will be the ones that survive.

We have provided a representative list of Web sites at *ArchitecturalRecord.com* for your perusal. They were chosen in the interest of demonstrating the wide variety of services and approaches to project extranets. If you are interested in further research into project extranets, take at look at Web sites for Tenlinks, the AIA, Extranetnews, and CADALOG. *K.M.*



NOW GET ABUSE RESISTANCE WITHOUT THE HEAVY INSTALLATION COST.

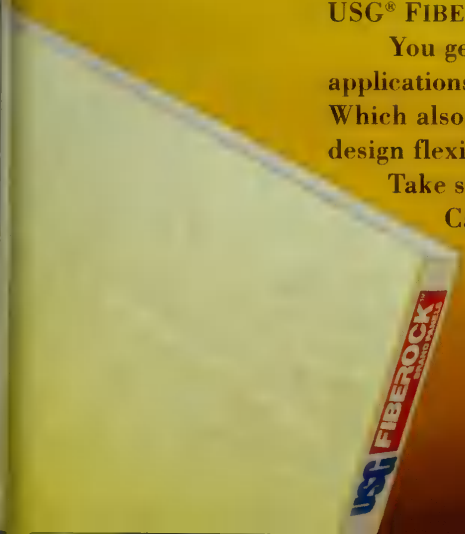
The time, labor and expense of masonry construction can add up to a weighty load. That's why more builders are switching to USG® FIBEROCK™ Brand Abuse-Resistant Panels.

You get all the abuse resistance required for institutional applications, with panels that install over conventional framing. Which also pays off in speedier occupancy and far greater design flexibility.

Take some of the pressure off your next project.

Call 1-800-USG-4YOU today or visit our website:

www.usg.com



USG

FIBEROCK™ BRAND

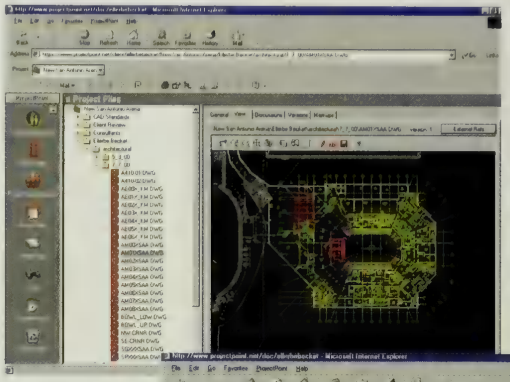
VHI ABUSE-RESISTANT GYPSUM FIBER PANELS

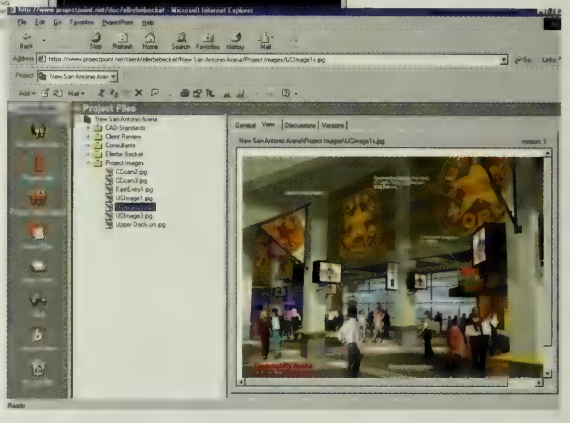
CIRCLE 58 ON INQUIRY CARD

© 1999 United States Gypsum Company

site and the home office. Construction drawings were uploaded to the extranet and then downloaded and plotted on the site.

Although Rizo-Patron admits that computer use is less common among contractors than among architects and engineers, 3D/I simply makes it a condition of employment. "We seriously consider whether we will work with a company that is not Internet-savvy," he says. Yet, even when the firm does work with companies and individuals who are not particularly knowledgeable about computers, the architects at 3D/I have found it easy to get those people to use a simple system like Buzzsaw right away.





Team members have access to drawings online and may edit and/or download them (left). Ellerbe Becket suggests ways to use signage in an entrance area (below). Participants can view files online or exchange them through a simple file-directory system.

THE ABILITY TO EXCHANGE FILES OVER THE INTERNET IS CAUSING A MAJOR CHANGE IN THE WAY PEOPLE WORK.

The Gilbane Building Company is a 125-year-old construction firm that frequently works on large, fast-tracked projects all over the country. As a major contractor, it faces the same challenges architectural firms do in meeting project deadlines and budgets. Gilbane decided to build online collaboration utilizing their existing project management system, Prolog Manager by Meridian Project Systems. Meridian's integrated Internet collaboration module is called Prolog WebSite, and it uses a browser interface as the front end for users.

Gilbane used Meridian's Prolog WebSite to link team members and the home office to tell them to put the most recent drawings on the site.

This kind of immediacy on the part of project extranets is what appeals to architecture firms. The site gives all parties the ability to see the most recent drawings as soon as they're uploaded to the Web site.

According to Alvaro Rizo-Patron, a project extranet's biggest drawback revolves around the question of whether an extranet should be used as a file-transfer site or as the primary location for maintaining project files. Specifically, a full-service architectural firm like 3D/I uses an intricate and detailed directory structure that helps them organize complicated projects. It's not practical for 3D/I to re-create that directory structure on the extranet site because this would require uploading a large number of files that do not need to be shared. Furthermore, the construction company doesn't have the time or inclination to learn the directory structure of every architectural firm with which it works.

Ideally, 3D/I would like to create an extension from the Buzzsaw extranet to its internal directory structure. However, because that has turned out to be impractical and because the company has elected to use Buzzsaw primarily for file exchange, 3D/I instead opted to create a simpler directory on Buzzsaw. This, however, adds an extra step to the firm's process: 3D/I has to move drawings from its in-house directory, rename them, and insert them into a separate directory that is then uploaded to the Internet.

For sure, it's an added chore, explains Rizo-Patron, "but it's not going to kill our use of Buzzsaw." The advantages of project extranets far outweigh this inconvenience. *K.M.*

3Plant for Johnson Controls

As the client's representative, 3D/International (3D/I) is relying on Buzzsaw to facilitate communication during construction of a plant in Reynosa, Mexico, for Johnson Controls' Automotive Systems Group. The 186,000-square-foot factory, scheduled to be completed in October 2000, will build automotive seat tracks.

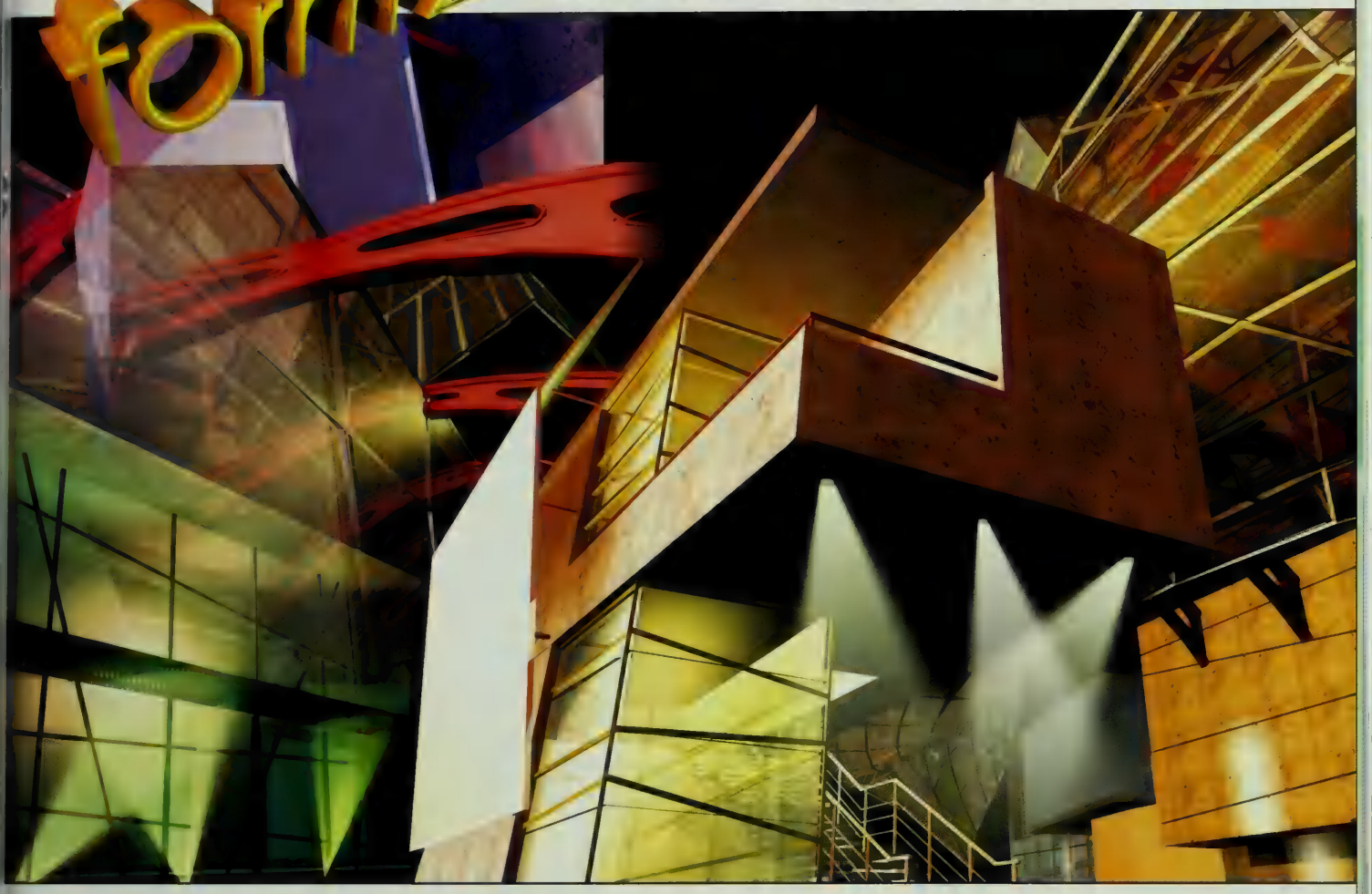
Before construction began, 3D/I set up an on-site office, fully equipped with computers and Internet connections, with three full-time 3D/I employees. In the first stages of the project, construction drawings were being exchanged via E-mail between 3D/I's San Antonio office and Reynosa. However, by the time the construction crew was ready to move earth, San Antonio–based designer David Ramirez had become increasingly frustrated with the communication process. E-mail was inefficient since it depends on people sending and checking E-mail on time. In addition, E-mail offers no revision control. Often Ramirez wasn't sure if the builders received the most recent information, let alone if they were in fact working with it.



So Ramirez decided to travel to Mexico to help coordinate the construction process. Around the same time, he learned about Buzzsaw and decided the project extranet site was a possible solution to his problem. In Reynosa, Ramirez logged on to the Internet, created a site for the Johnson project, and, within minutes,

formZ

3D FORM SYNTHESIZER



From Sport City by Elisa Lui, Architectural Senior, University of California at Berkeley. Instructor: John Marx.

"Signifying a new age of dynamic movements, exciting advantages, and ultimate fun, the Sport City is a stage... Its form is derived from the shape of the human heart. Twisting, bending, and overlapping, the two organic glass tubes in the center move like the rushing red blood cell in our arterioles..."

auto•des•sys, Inc. is delighted to support the exploratory imagination of the novice designers that will shape tomorrow's physical world.



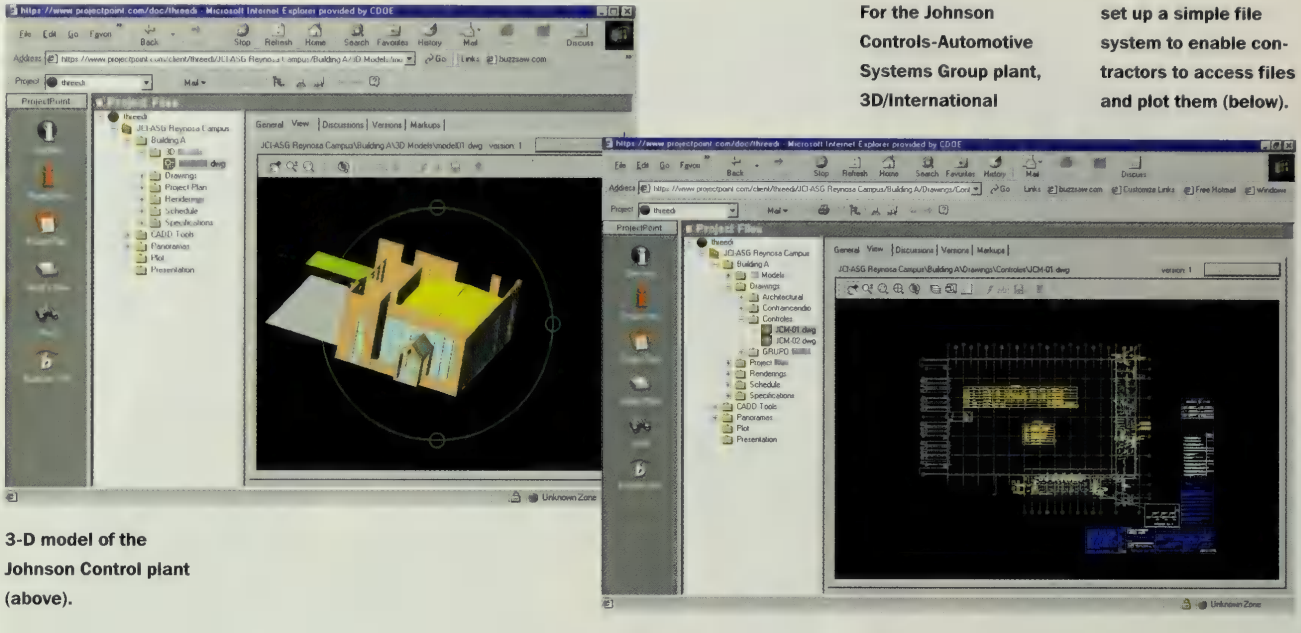
3D solid and surface modeling software at its best, with photorealistic rendering, radiosity, and animation. Visit us at **www.formz.com** to download a free demo. Call (614) 488-8838 or fax (614) 488-0848 for information.

Mac

MICROSOFT® WINDOWS® COMPATIBLE

autodessys INC

CIRCLE 59 ON INQUIRY CARD



For the Johnson Controls-Automotive Systems Group plant, 3D/International set up a simple file system to enable contractors to access files and plot them (below).

3-D model of the Johnson Control plant (above).

bers in the recent $12-million, 150,000-square-foot BassPro Retail Shop in Houston. Kathy Kearney is Gilbane's Information Systems Manager. She is putting Prolog WebSite to work tracking information related to the project including drawing documents, work journal entries, notices to comply, RFIs and meeting minutes. From the site, the construction team uploads digital photographs of the project, eliminating the need for faxes or couriers.

For this project, Gilbane has signed up for 10 licenses of Prolog WebSite to link the architect and project owner located in Missouri, with contractors located throughout Texas, and inside project staff members at Gilbane. Ease of setup is as important to Kearney as it is to Mike Hnastchenko of Ellerbe Becket and to the 3D/I team. Kearney found it easy to integrate with Prolog WebSite, unifying it into her project management system. She says, "Once the initial setup of a project is completed in Prolog Manager, the project is then added to the Web site while designating the requested project specific categories and verifying user access settings." Once this stage is complete, the ongoing maintenance and administration of the site is minimal, she says.

Bells and whistles

The many project extranet providers offer a large menu of services from which to pick and choose. In addition to the basics—file exchange, markups, and comments—a firm can take advantage of project management; PIMs (personal information managers with calendars, address books, and memos); online visualizations, including animated walk-throughs; video collaboration; and Web cams to monitor construction progress. The extranet providers' home sites are evolving into discipline-specific portals that offer custom-tailored services such as bidding on construction supplies or facilities management (see table for a listing of sites and their areas of specialization at *architecturalrecord.com*).

It seems, however, that few firms are taking advantage of the more elaborate bells and whistles. When asked if he would use a Web cam on-site to monitor construction progress, 3D/I's Rizo-Patron said that such real-time monitoring is not practical, given the limitations of bandwidth and the huge load that video puts on both internal and Internet networks. Usually, all one can see with such Web-cam systems are a few frames per second of low-grade video. Instead, Rizo-Patron prefers still shots uploaded at regular intervals.

Likewise, even though Ellerbe Becket creates visualizations with 3D Studio MAX, Hnastchenko does not see the need to make walk-throughs and animations available on the project extranet since the files are large and looking at animations over the Internet can be a slow, frame-by-frame experience. Both 3D/I and Ellerbe Becket make visualizations of 3-D models available to team members. As for more sophisticated project-tracking and project-management capabilities offered by project extranets, Hnastchenko points out that Ellerbe Becket has its own project-management system already established in-house, so it has no need for a similar capability from Buzzsaw. Ellerbe Becket only uploads drawings onto the extranet after they have been signed off internally.

For Gilbane, on the other hand, the use of the Internet for collaboration is an integral part of the project management process. Also, like 3D/I, Gilbane finds the ability to upload digital still photos to be very valuable.

Taking the capability one step further, Meridian has support for the 360-degree digital photos created using the IPIX system. IPIX uses a special camera attachment that lets users take two 180-degree images with standard digital cameras that can be stitched together. These photos let users see all around a construction site.

So far, the broadest use of project extranets today is simply for file-storage viewing and file transfer. That may not sound revolutionary, yet the ability to exchange files over the Internet is causing a fundamental change in the way people work: gradually, the locus of control is moving ever farther from the local desktop machine. The evolution of the Internet as a vast central storage site makes access to the information possible anytime, from anywhere in the world. As Mike Hnastchenko puts it, "We are setting up a system where collaboration can happen." ■

WWW *For a representative list of Web sites demonstrating a wide variety of services and approaches to project extranets, go to* ***Digital Architect*** *at:* ***www.architecturalrecord.com***



SLEEK LINES SUBTLE CURVES AND GRACEFUL NEO CLASSIC ARCHES

MAKE SURE THEY BUILD IT THE WAY YOU DESIGNED IT.

buzzsaw.com™
an Autodesk® venture

Set up a personalized project site on Buzzsaw.com's secure servers and get your whole team working together in a matter of minutes. Register the members you want with the permission level you choose, and use your central workspace to track decisions and changes throughout the project lifespan. From design collaboration, to bidding and buying, to construction management, it's all in a day's work at Buzzsaw.com.

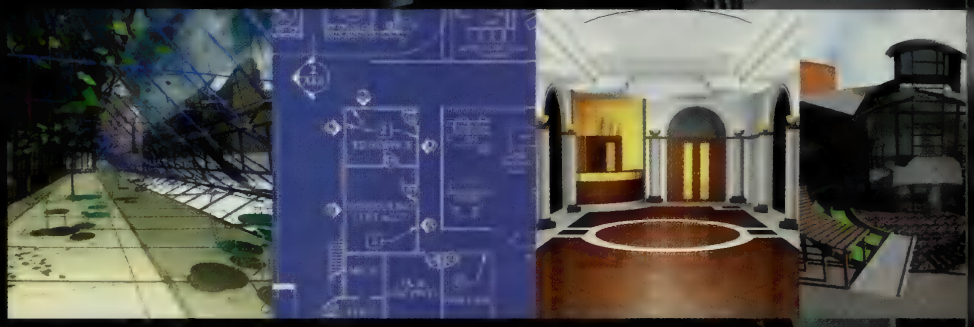
CIRCLE 60 ON INQUIRY CARD

www.vectorworksarchitect.com
1-888-646-4223

VectorWorks ARCHITECT

Delivers the promise of Architectural CAD





"VectorWorks ARCHITECT is a great program...I am currently getting re-trained in AutoCAD Architectural Desktop Revision 2...and it just doesn't stack up to VectorWorks ARCHITECT."
—Edward Koenig, Carmelhill Drafting Studio

Isn't it about time someone addressed the promise of CAD?
Introducing VectorWorks ARCHITECT

Engineered and built by professionals in your discipline, ARCHITECT delivers on the promise of architectural CAD. It does everything CAD was supposed to do but didn't quite. Truly a better way to design, ARCHITECT integrates Design, Production and Project Management into a system that delivers unparalleled productivity—all at a price even the smallest firm can afford.

INTEGRATION

- Complete integration of your 2D plans, 3D models, reports, schedules & client presentations
- Scalable CAD standards make it easy to structure & manage documents

DESIGN

- Unprecedented tools for programming studies and analysis
- Thousands of "Intelligent" building Objects & 2D/3D architectural symbols
- State of the art Solar Animator

PRODUCTIVITY

- An easy system for archiving, placing, & managing notes
- Automatic creation of reports & schedules
- Project Management features including issue management, error & revision control, & workgroup referencing



Special Offer to Readers of *ARCHITECTURAL RECORD*

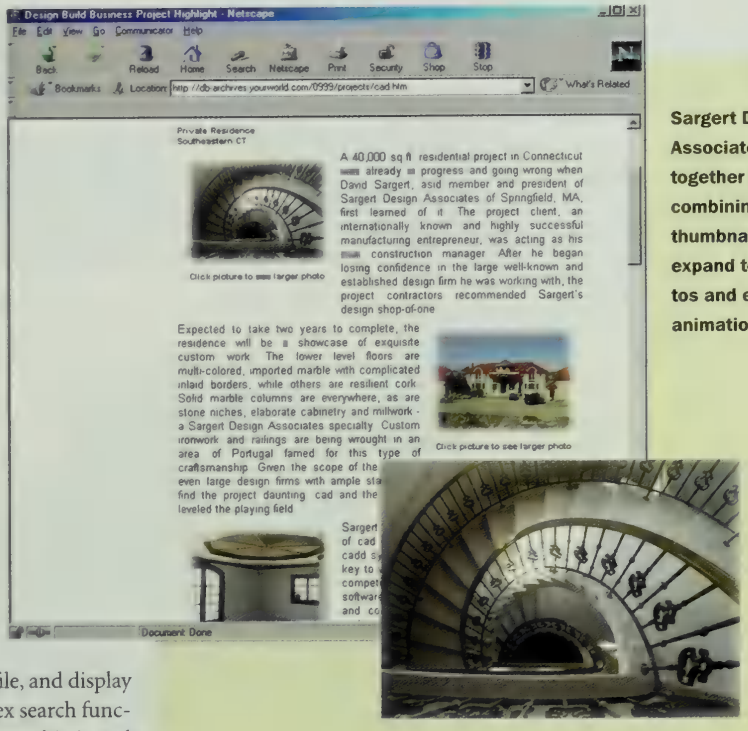
Save over $180 by purchasing VectorWorks ARCHITECT direct for $1395 or without photorealistic rendering for $1140. Includes FREE Tech Support and a 90-Day Money-Back Guarantee.
*Existing VectorWorks users call for upgrade pricing.

NEMETSCHEK
NORTH AMERICA

CIRCLE 61 ON INQUIRY CA

Architects Explore Uses for Innovative Offline Web Pages

By Evan H. Shu, AIA



Sargent Design Associates can put together presentations combining text and thumbnails, which can expand to larger photos and even an animation file.

Some background on browsers

It is important to understand that, for all the fancy Web page graphics it shows us in our forays into the Internet, a Web browser is, in essence, nothing more than a fancy text-file viewer. It literally does nothing more than open up a simple text file, much like a word-processing file, and display it on a computer screen. What appear to be complex search functions are not done by Web browsers at all but by sophisticated search-engine software programs that exist on the Internet itself. Plug-in modules can further enhance Web browser capabilities to play audio, video, or animation files, but it is useful to remember that, at its heart, a Web browser is a text-file viewer.

Furthermore, a Web page can be thought of as a computer file comprised of unencoded or "plain" text that is formatted with additional special HTML tagging language. The HTML coding allows both text and graphic images to be displayed in various and enhanced ways.

The Web browser sees no difference between a Web page that it opens on your hard drive and one that it gets off the Internet. If a plain text file on your computer has either an HTM or HTML file extension (for example, TESTPAGE.HTM), it becomes a Web page; you can click on it with your mouse and your Web browser will immediately take a look at it. So Web pages can exist online on a server tied into the Internet or just as easily offline on your own computer system.

Although Web language (HTML) is fairly rudimentary (for example, Headline makes the word *Headline* appear in bold lettering), most people would rather not get into the nitty-gritty of writing directly in Web language. Fortunately for them, they are no longer required to, as there are many software programs now that can directly export from a word-processing or desktop-publishing document into Web format. In fact, many of the current standard word-processing software programs, such as Microsoft Word, routinely show a choice in their File menu that says "Save as Web Page." So creating Web pages is now just a simple matter of creating a typical page in your word-processing software and then saving it in Web format. One does not need to get training in HTML programming at all (although such training certainly helps in trying to "fix" mistakes in those automated exports).

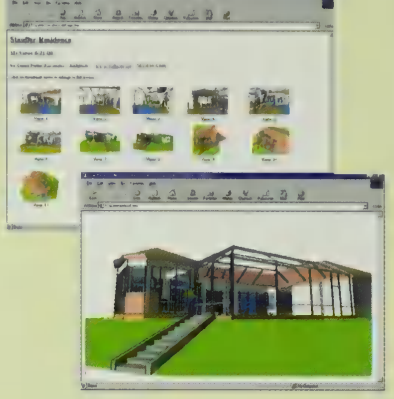
The key element that makes Web pages so versatile, whether they are found online or offline, is that any word, phrase, or picture on that page can be made into a link; when clicked on with your mouse, this link sends you to another Web page or opens a specified file. This linking ability is the essential quality that puts the "web" into Web page. The versatility of linking Web pages has led to a number of new offline uses that are proving to be extremely useful to many architects.

Office manuals and handbooks

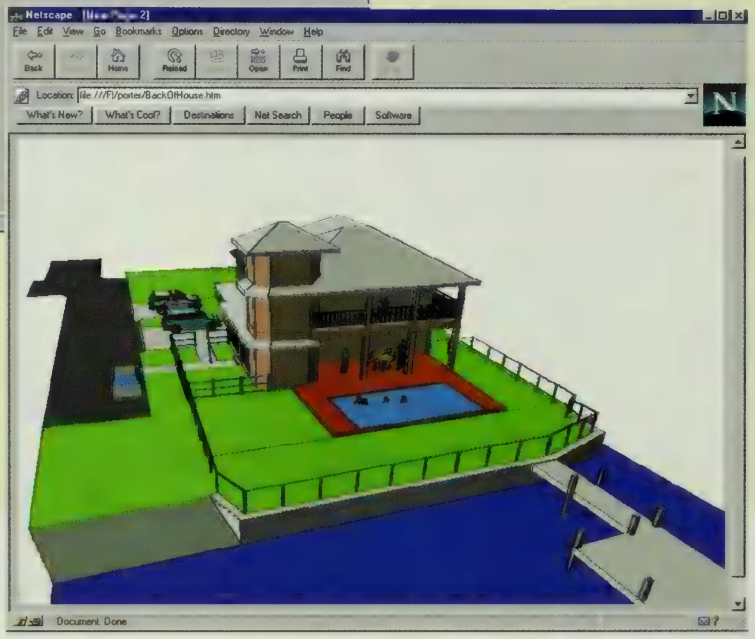
According to Donald R. Parker, AIA, of Parker Associates in Russellville, Ala., offline Web pages are the perfect medium for in-house office and CAD handbooks: "It's quicker and easier to find information than in three-ring binders because related topics can be linked. The pages don't get torn or lost. Several people can view the same information at the same time. And, with no multiple copies, Web pages are easier to update than paper manuals."

Evan H. Shu, AIA, principal with Shu Associates Inc., an architectural firm in Melrose, Mass., is editor and publisher of Cheap Tricks, *a monthly newsletter for DataCAD users.*





Porter Associates can quickly give its clients a multiple view format for schematic design that they can view at any time using their Web browser.



Porter Associates uses Web browser formats for giving schematic design presentations, which also can be self-run by the client.

Parker also maintains that, unlike paper manuals, a Web page manual is much more likely to be used: "It's more efficient and it encourages us to look up information we may otherwise guess at." Another plus is that staff members, already adept at browsing on the Internet, know how to use it. "Plus," Parker adds with a wink, "it's just more fun!"

Parker has created a "desktop shortcut" on each office station that goes to an office "home page" with links to the related Web pages addressing such topics as policies and procedures, job numbers, and phone numbers for very quick and easy access. With this system, all stations get the same Web pages from the central network server, so Parker can be sure that everybody receives the latest, current information and is literally on the "same page." Also, since no Internet connection is needed, Parker does not have to worry about "policing" employee use of the Internet.

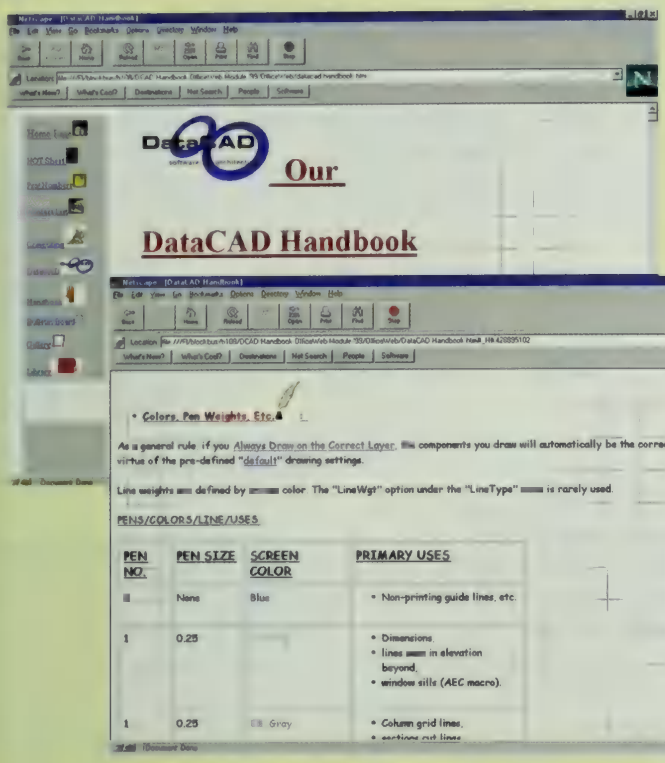
Client presentations

In recent years, traditional slide-projector presentations, once common at professional seminars and the like, have virtually been replaced by computer presentations created with Microsoft Office's PowerPoint software. These PowerPoint presentations have become so pervasive that many architects are expressing distaste for them. They tend to have a "sameness" in look and predictability in flow because, in many ways, they are limited as to how they can be modified or customized for individual presentations.

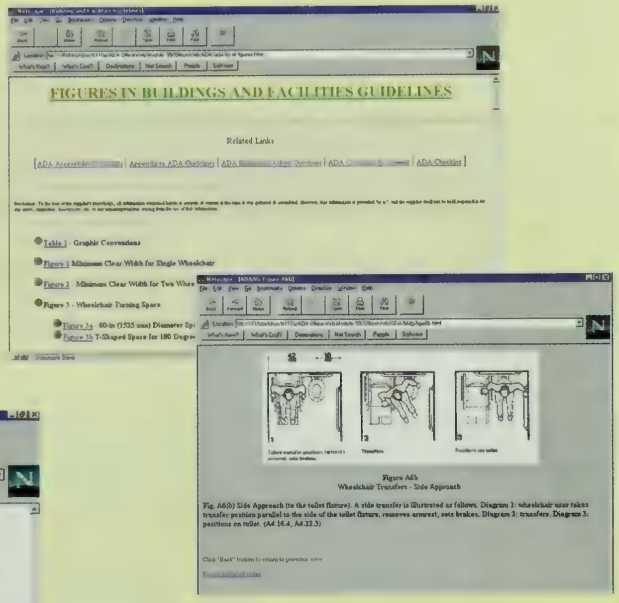
Web page presentations may be the solution. These give the designer much more freedom in creating a customized look. Think of the enormous variety of looks and formats that can be found in Web pages on the Internet; that same creativity can be applied to design presentations in Web page format offline. Web pages can easily display the standard plans, details, and photos of a typical presentation. And, since Web pages can be designed to link to other file media, one can use so-called Web page plug-ins to load dynamic 3-D CAD models, or play audio, video, and animation files for a true multimedia effect.

David Porter, of Porter Associates in Palm Beach Gardens, Fla., has recently found much success in doing Web page presentations on his laptop. Instead of toting the typical slide projector for their design presentations, now more architects are bringing along computer projection devices if need be. In fact, it is more commonplace to find modern presentation rooms that are already computer-ready. "In my town's city hall, an architect can just bring in his or her laptop (no more boards or unwieldy prints), plug in, and away the presentation goes, using browser pages and projecting the images onto a screen in the assembly room."

Porter, who has had clients find and hire him via the AIA's online Web page (which includes a list of contacts and links to the architects' Web pages), says that more and more such clients are very familiar with Web-browsing software. Now he will even E-mail them a "Web page package" (a set of files that they can access offline with their Web browsers) to view the design presentation on their own comput-



Parker Associates has its CAD standards manual in Web format on its network, and any designer can readily access the plotting standards in an instant.



Diagrams, such as this figure showing wheelchair clearances from the ADA guidelines, can be readily accessed.

ers. While clients may require special training to use the complex graphic-viewing software required for CAD or rendering files, they immediately know how to display any view of their choice from the Web page package. And, unlike simply running a "canned" presentation, they have the freedom to show other views in the order that they choose. "Being able to see all around and into their projects by using a medium they have become familiar with has brought my clients into the design process more so than with a paper presentation that they might not grasp as well."

This methodology also created another unforeseen benefit: "The Web page made their project very personalized," Porter said. "I think it is like seeing oneself on TV. By pulling up their project with its multiple views onto their computer monitor, it gives them a personal feeling of pride and excitement that they are looking at what their completed project would look like. They can show their friends their project on the screen as well . . . like 'baby pictures.'"

THE VERSATILITY OF LINKING WEB PAGES HAS LED TO NEW OFFLINE USES THAT ARE PROVING TO BE EXTREMELY USEFUL.

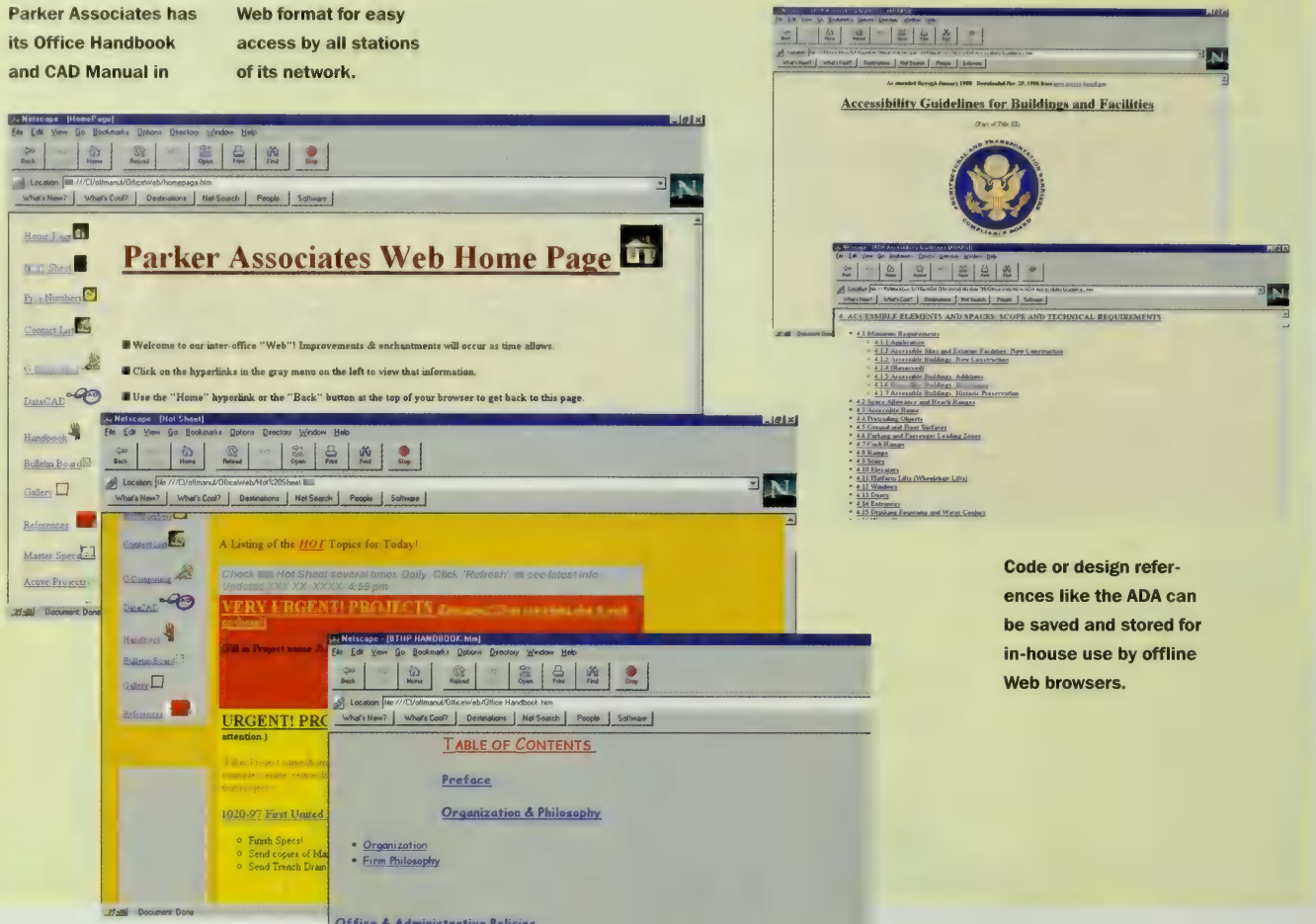
Such a portable and self-running presentation came in handy when board of appeals staff members, in preparation for an upcoming hearing, visited one of Porter's residential clients. The client dragged them inside his home and proudly showed them the Web page design presentation of the project on his computer. This "owner-operated" presentation no doubt helped to fuel the positive staff report leading to a favorable outcome at the hearing.

Code reference

In-house Web pages are also playing an increasing role in maintaining code and other informational resources. Many resources that are found online via the Internet can be simply "right-click" copied to the firm's own system for later viewing offline. For example, Parker has created an "ADA module" on his network that has the "Accessibility Guidelines for Buildings & Facilities" from Title III of The Americans with Disabilities Act (ADA), illustrations and all, ready for viewing at the touch of a button. Anyone who has waited through long server delays, experienced Internet traffic bottlenecks, or had connection problems with an Internet Service Provider that made online Web pages slow to load or, worse yet, simply unavailable, can appreciate how much time can be saved by having these Web pages available offline. Space usage for storing both text and graphics is usually not a big problem. For example, Parker's ADA module, illustrations and all, takes up only four megabytes total.

Collecting and creating these offline Web pages, says Parker, "pays for itself in time saved in the first couple of uses. This method creates searchable and fully linked paragraphs, figures, and appendixes. No more fumbling through the pages of the ADA; you can find the information you need—from "knee space" to "ramp"—in seconds by using your Web browser's simple Edit and Search commands. By staying offline, you are not at the mercy of Internet traffic that may delay or block your keyword search online.

Parker Associates has its Office Handbook and CAD Manual in Web format for easy access by all stations of its network.



Code or design references like the ADA can be saved and stored for in-house use by offline Web browsers.

Detail libraries

As more and more CAD programs allow users to create thumbnail views of CAD drawings, Web pages can also be created to serve as detail library directories. The ability to combine text with pictures that immediately link to other resources is invaluable to the architect who is trying to pull it all together. David K. Sargert, an interior designer with Sargert Design Associates in Springfield, Mass., is a big supporter of this method:

COLLECTING AND CREATING OFFLINE WEB PAGES PAYS FOR ITSELF IN TIME SAVED IN THE FIRST COUPLE OF USES.

"You can easily view and access your detail drawings, as well as quickly go to hyperlinked specifications, codes, and even manufacturers."

An architect no longer has to decipher a long, forgotten CAD filename; that filename now can be associated with a thumbnail picture and a full description of the detail in question in a Web page table of contents for the firm's detail libraries.

Design competitions

Web page technology is also uniquely suited to developing presentations for time-sensitive design competitions. Consider the annual 3-D CAD Shootout, hosted by Geoff Langdon of Architectural CADD Consultants of Beverly, Mass. A design project program is given to three-person teams, who then have three hours to produce a full design presentation. In years past, well-prepared teams created in advance Web page templates that had blank slots for the required views in order to preplan an organized and thorough presentation format. Since these numerous required views were specified in advance, these teams could fully prepare their Web page templates with attractive titles, logos, and notations. While other teams scrambled to put their renderings and plans together in some coherent fashion, these "Web template" teams earned very high marks from the judges for their thoroughness and attractive presentations. Such extreme time-pressured presentations are not the norm, but architects looking to avoid haphazard and last-second presentation formats can similarly prepare Web page presentation templates in advance.

Spreading the links

One added benefit of this innovative approach is that such offline Web pages are easily shared as resources for others to use or else as templates to modify. Parker has already donated his "OfficeWeb" modules for office policies, CAD handbook & ADA reference to a DataCAD shareware service (www.world.std.com/~eshu/ctw/ctw.htm), and Porter intends to do the same with his Web page presentation templates. As other architects become familiar with and take advantage of these techniques, we are bound to see additional Web page applications. The opportunities may only be limited by the architect's own design creativity. ■



Half of a great idea...
is just that

MERIDIAN PROJECT SYSTEMS DELIVERS

Meridian Project Systems offers the AEC industry's only complete project management solution.

Prolog has long been known to be the best project management solution and it just got better! Announcing the Meridian Project Pack v6 running on Microsoft SQL Server 7.

The Meridian Project Pack includes:

- **Prolog Website**–Collaboration application designed for the project team.
- **Prolog Manager**–Power application designed for project managers.
- **Prolog Executive**–Data mining application for executives.
- **Prolog Pocket**–Data collection application designed for the field.

And the power of Prolog is now available as an internet hosted solution at ProjectTalk.com.

We don't know why anyone would settle for less.

ProjectTalk.com
where the project team meets

Meridian Project Pack is available by subscription ■ ProjectTalk.com

MERIDIAN PROJECT PACK
Powered by Prolog™

Meridian PROJECT SYSTEMS

For information call (800) 850-2660
or e-mail sales@mps.com
www.mps.com
www.projecttalk.com

rosoft Certified Solution Provider

©2000 Meridian Project Systems, Inc. All rights reserved

CIRCLE 62 ON INQUIRY CARD

It's big. It's clumsy. And it's not too bright.



Sound like your architectural software?

You can continue plodding along with your current CAD software, or you can make the smart move to ArchiCAD. It can be mastered surprisingly fast, and only ArchiCAD has been designed specifically for architects. Really, isn't it time you raised your standards and let go of the past? Embrace the intelligent and integrated approach to building design and documentation.

SEVEN REASONS TO SWITCH

- Intuitive commands easy to master
- Fully AutoCAD compatible
- Remarkable efficiency gains and ROI
- Cutting edge presentation features
- Fully parametric objects
- Time-saving automatic documentation
- 30-day money back guarantee

GRAPHISOFT

Graphisoft and ArchiCAD are registered trademarks of Graphisoft R&D Rt.

ArchiCAD®

www.graphisoft.com/ArchiCAD 800.344.3468
Visit or call for a FREE Presentation CD and the location of an ArchiCAD dealer near you.

CIRCLE 63 ON INQUIRY CARD

Digital Architect

Technology enables disabled architects

By B.J. Novitski

When Joseph Del Vecchio graduated from the Rhode Island School of Design in the mid-1980s, he was blocked from pursuing a routine architectural internship. Even if he'd found a local office accessible to his wheelchair, he would have been unable to reach over the large drafting boards that were routinely assigned to apprentices in those days. In addition, seemingly simple tasks, such as getting in a car and driving to a meeting, were tiring and time-consuming. Thus he would not have been able to work the grueling hours normally expected of architectural interns. So he and his wife, Christina, also an architect intern, established a home-based business and began to explore ways that emerging computer technologies could help them compete.

They adopted Sonata, an early 3-D parametric building modeler developed in Europe. Because the modeler could automatically generate 2-D drawings, the software greatly reduced the time needed for drafting. The Del Vecchios were also early experimenters with virtual-reality modeling language (VRML) 3-D modeling. Using this system, they could quickly produce models of designs-in-progress, send them to clients over the Internet, and "walk through" the design without inconvenient travel. Soon they will begin using digital photography in construction administration. Anyone at a job site can send photos or video of a problem, which the architects can receive and view over the Internet.

In the 16 years since finishing school, the Del Vecchios have leveled the playing field and formed Access Development Corporation. "The information age is working handsomely for those people who are profoundly disabled," says Joe Del Vecchio. "I'd probably not be where I am today without it." Despite his mobility limits, he is a successful architect; his clients are the happy beneficiaries of hard-learned lessons about accessibility, efficient use of space, and technology. Indeed, his firm has as much work as it can handle.

Also successful, but having overcome different barriers, is hearing-impaired architect Robert Nichols. He is principal of the award-winning Nichols Design Associates in Washington, D.C. He notes that many architects believe that accommodating wheelchairs is all there is to accessibility. The simple yet overlooked installation of teletype-equipped phones and captioned PA systems in public spaces can go a long way. Nichols' sensitivity to this, along with his ability to communicate with hearing-impaired clients, has let him carve out a niche in accessible public accommodation. Recently, his ability to communicate has been tremendously boosted by the advent of E-mail.



The BAT personal keyboard from InfoGrip replaces a full-size computer keyboard. Characters are produced by pressing combinations of buttons.

Thanks to technology and efforts to encourage disabled youth to join design professions, the success of Nichols and the Del Vecchios may soon be more common.

Starting out the hard way

It was not too long ago, however, that the situation was very different. In the early 1980s Washington State University professor Jeffrey Burnett began to adapt computer equipment for quadriplegic architects. He outfitted them with then-state-of-the-art PCs and cobbled together head-mounted pointing devices to control the screen cursor. He programmed some voice-recognition capabilities to operate CAD systems and even experimented with robotic arms to handle floppy disks. Though effective in returning a few injured architects to practice, Burnett's heroic work was hampered by the available hardware, which was primitive by today's standards. Now, he says, technological improvements have come to the aid of limited-mobility architects. These include more powerful processors, higher-capacity yet cheaper mass storage units, wireless communications bringing E-mail to the wheelchair-mounted laptop, and standardized adaptive peripheral devices.

Examples of these peripheral devices are single-handed keyboards, a trackball to replace the mouse, and lightweight headset pointers. Despite great progress, Burnett says, work still remains to make all these devices work smoothly with the specialized software that architects use. Such integration requires the efforts of experts familiar with the technology, the nature of disabilities, and the requirements of architects.



The Dragon NaturallyMobile recorder takes dictation, stores words on memory cards, then downloads into a PC's word processor.

Recent adaptive innovations

Key to an architect's skill is the ability to write, but for those with limited use of their hands, taking notes at a meeting and typing on a keyboard

B.J. Novitski writes about the role of technology in architectural practice and education. She is the author of Rendering Real and Imagined Buildings.

can be difficult or impossible. For them—and indeed for any architect who has trouble typing—there is good news in the field of voice recognition. Although voice commands have offered a feasible but limited interface to computer software since Burnett's pioneering days, until recently these systems were highly flawed. They often required careful, unnatural speech, with pauses after every word, and the error rate was high. Now speech-recognition systems are taking advantage of today's higher computing power, and they can convert naturally spoken speech into nearly error-free word-processed text.

One such system is NaturallySpeaking, from Dragon Systems, Inc. It "takes dictation," and subsequent editing can also be controlled by voice. Dragon's new handheld digital recorder can be taken into meetings and used to capture an unlimited amount of speech on removable memory cards. Later, the recorder can be plugged into a PC and automatically transcribed. Unlike older voice recognition systems, NaturallySpeaking does not require pauses between words and can be "trained" to recognize idiosyncratic speech, including that of stroke victims or people with speech impediments.

This is only one of the many adaptive devices available through Infogrip, Inc., a catalogue distributor of various adaptive devices. They also feature HeadMaster, manufactured by the Prentke Romich Company. This is a lightweight, wireless, infrared mouse emulator that can be mounted on a headset or eyeglasses frame. Slight head movements move the cursor around the screen. Users with no hand mobility can use it in conjunction with a sip-puff mouth switch to simulate mouse clicks. These devices replace the usual manual methods of interacting with computer-aided design systems. For architects with limited manual dexterity, there is an array of joysticks and trackballs that are simpler to use than mice. These are also enjoyed by the "temporarily abled" who wish to avoid the repetitive-motion injuries resulting from prolonged PC use.

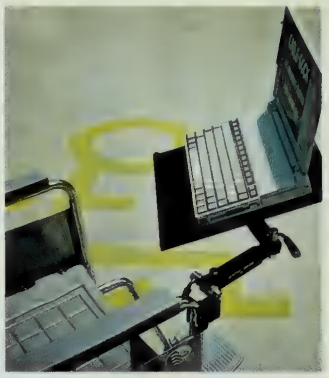
Infogrip also sells Jotto Desks, which turn a wheelchair into a mobile office. These are, in effect, desk surfaces on which laptops, cell phones, and other equipment are mounted with industrial-grade Velcro. The wheelchair user can swing the desk to one side when moving in and out of the chair.

The HeadMaster 2000 is a wireless mouse.



Mentoring the next generation

With all the adaptive technologies available now, there are fewer physical impediments to the disabled becoming architects. However, some cultural hurdles remain: There are few visible role models for young people to follow. This is about to change thanks to Elaine Ostroff, co-founder of the Adaptive Environments Center (www.adaptenv.org) in Boston. She is initiating a mentoring program to connect disabled design students and new professionals to practitioners with matching interests. The mentorship, she believes, will help the younger generation address the physical, attitudinal, and practical roadblocks between them and their careers.



The Jotto Desk is an adjustable work surface for the wheelchair.

Ostroff's program is part of "Access to Design Professions," an international career-development program created as a living memorial to pioneering disabilities activist Ron Mace, FAIA. It is being funded by the National Endowment for the Arts and by NEC Foundation of America. The mentorship program was jump-started at the biannual Designing for the 21st Century II: An International Conference on Universal Design, held in Providence in June. There, a group of disabled architects and designers from all over the world met to discuss the importance of, and mechanisms for, mentoring young designers. Once again, technology is rising to the occasion. Because there are relatively few disabled practicing architects, and they are scattered all over the world, Ostroff will be arranging for both the matching and the mentoring meetings to occur on the Internet. A secure online directory will help would-be participants match interests and develop working relationships.

Ostroff is also seeking funding for a project to help students identify the level of access at design schools before they apply. Anecdotal evidence suggests that, despite years of improvements in campus accessibility, architecture schools and studio environments remain problematic.

Of double significance

As important as it is to promote professional diversity, this concerted effort to get more disabled people into architecture careers will ultimately accomplish more than that. Behind this effort is the conviction that disabled architects are more sensitive and creative designers of universally designed environments. There is probably no more effective means of becoming sensitized to accessibility issues than to have personal experience confronting environmental barriers. Indeed, according to Valerie Fletcher, the current executive director of the Adaptive Environments Center, this explains why there is a high level of interest in design among disabled youth. They also tend to be skilled and experienced problem solvers. The faster they can join the profession and raise the awareness of the rest of us, the sooner the built environment will become universally accessible. ■

Web site technology sources

Infogrip, Inc.
1141 E. Main Street
Ventura, CA 93001
805/652–0770
800/397–0921
Fax: 805/652–0880
http://www.infogrip.com

HeadMaster 2000
Prentke Romich Company
1022 Heyl Road
Wooster, OH 44691
800/262–1984
http://www.prentrom.com

NaturallySpeaking
Dragon Systems, Inc.
320 Nevada Street
Newton, MA 02460
617/965–5200
FAX: 617/965–2374
http://www.dragonsys.com

Jotto Desk
Assembled Products Corporation
115 East Linden Street,
Rogers, AR
501/636–5776
Fax: 501/636–3245
U.S. and Canada: 800/548–3373
http://www.assembledproducts.co

WWW *For a list of vendors with technology products for disabled people, go to* ***Digital Architect*** *at:* ***www.architecturalrecord.com***

START SOMEWHERE.

BRIC
ROAD.



NEW DESTINATIONS. ONE STEP AT A TIME.

Right now, you don't need an end-to-end, b2b, dot.com, all-inclusive, integrated, clicks and mortar solution to manage the building process. Today, you just need to save time and money. Fast. Bricsnet has solutions you can use immediately to speed up the building process. So start somewhere simple. And when you are ready for the future — you'll have something you can really build on. Visit Bricsnet.com today.

bricsnet

BUILD ON IT.

CIRCLE 64 ON INQUIRY CARD

Copyright © 2000 BRICSNET. All rights reserved. Bricsnet, the Bricsnet logo, and Build on it, are trademarks of Bricsnet N.V.



Just relax – because you're in the hands of the real professionals. Nobody knows more about home entertainment than Sony. That's why Sony is your best choice for planning a home entertainment system that delivers real theatrical impact. A system with the latest components and state-of-the-art technologies, for spectacular video and sound. How do you get started? That's the easy part: just call your Sony Authorized A/V Contractor. For a name and location in your area, call: 1-800-295-SONY (7669).

SONY

CONSUMER INTEGRATED SYSTEMS

© 1996 Sony Electronics Inc. All rights reserved. Reproduction in whole or in part ... rk of Sony.

CIRCLE 65 ON INQUIRY CARD

New tech tools for diverse practice

By Jerry Laiserin, FAIA

Pocket-size helper

Prolog Pocket, Meridian Project Systems

Prolog Manager has long been one of the best software tools for managing logs, lists, and overall administration of the construction phase—everything from field observation notes to punchlists. But Prolog resided on the office PC or laptop, while all the activities took place in the field. That left project architects to scribble longhand or dictate onto tape for subsequent transcription. Lots of duplication and opportunity for error.

The new pocket edition, part of Meridian's Project Pack, solves these problems by scaling down the Prolog data-entry and retrieval interface to the handheld form factor of WindowsCE and Palm computing hardware. Project architects can enter notes and step through forms via the touch interface to the tiny screens while in the field, then synchronize, via wired or wireless connection, to the full-scale Prolog Manager software running on a PC back in the office. A time-consuming and error-prone manual process becomes digitized, saving money and time, and ensuring quality.

System requirements: Windows CE2.0 or better, or Palm III or better, for handheld device; Windows 95/98/NT4.0/2000 for desktop or laptop PC. Meridian Project Systems, 1750 Howe Ave., Suite 640, Sacramento, Calif. 95825; 800/850–2660; www.mps.com.

Contributing editor Jerry Laiserin, FAIA, provides strategic consulting services to architects and their technology providers.

Back in black

IBM Intellistation M Pro PC

Throughout the history of computers, IBM was considered a safe choice for hardware. "Nobody ever got fired for choosing IBM," so they said. Yet for much of the 1990s IBM seemed to have lost its way, peddling lackluster machines with noncompetitive pricing and performance. The current Intellistation lineup of workstation PCs represents a successful rebound.

As tested, the Intellistation M Pro comes equipped with a screaming 866 Mhz Pentium III processor, a generous 256MB of RAM, and an ultrafast 9GB SCSI hard drive. The pièce de résistance is an optional ELSA Gloria OpenGL video display adapter, driving IBM's sinfully lush, flat panel monitor. This configuration handily disposes of even the most demanding CAD chores and desktop publishing duties.

Intensive users of photorealistic visualization tools, such as PhotoShop, Lightscape, and 3D Studio, or large firms looking for a few high-end "graphics stations," might consider trading up to the Intellistation Z Pro, for its Intense Wildcat 4110 video display adapter, but the M Pro is more than sufficient for 90 percent of the work that 90 percent of architects do.

While competing machines, such as the Dell Precision series, include similar components and comparable specs, IBM's all-black Intellistation excels in what automotive folks call "fit and finish." The CPU enclosure is stylishly designed and exquisitely put together. The monitor display is almost hypnotic in its rich color, contrast, and detail (it also pivots between "landscape" and "portrait" modes). Even the keyboard includes a thoughtfully ergonomic, detachable wrist rest. If you own more than one black shirt, this is the computer for you.



The IBM Intellistation M Pro PC

System requirements: Self-contained. IBM, 1133 Westchester Ave, White Plains, N.Y. 10604; 800/IBM–7255; www.ibm.com.

Sleight of hand

OnSite View, Autodesk

Computerized building designs exist in a purely digital realm; the bricks and mortar of real construction sites will not be replaced anytime soon by cyber-bricks. But the job-site trailer, crowded with tattered rolls of working drawings, may soon be superseded by architects and contractors wielding handheld computers and Autodesk's OnSite View.

The latest generation of portable devices for Microsoft's WindowsCE operating software allows high-resolution color displays on touch screens ranging from steno-pad size (the equivalent of a 10-inch diagonal monitor display) all the way down to "palm size." OnSite View software from Autodesk, maker of market-leading AutoCAD, enables the new handheld devices to display regular AutoCAD drawings, complete with the ability to pan and zoom, manipulate layers, measure distances and areas, as well as to "redline" and annotate.

Synchronization between OnSite View and the user's desktop or laptop PC is supported by any connection that the underlying hardware supports: wired docking "cradle"; infrared "beaming"; modem or network; even wireless Internet. This includes automatically transferring all notes, comments, and sketches to the original drawing files via AutoCAD's built-in Redline Markup Language. Simple, slick, and a seismic change in handling "drawings" during construction.

System requirements: WindowsCE 2.11 or better; AutoCAD2000.

Autodesk, Inc., 111 McInnis Parkway, San Rafael, Calif. 94903; 415/507–5000; www.autodesk.com.

Solid as a brick
Bricsnet Architecturals for IntelliCAD

General-purpose CAD programs, such as Autodesk's AutoCAD or Bentley Systems' Microstation, are equally well adapted to drawing buildings, machine parts, or proverbial widgets. Because this flexibility makes software cumbersome for designers in any one discipline to use in unmodified form, architects seek alternatives: architecture-specific programs, such as Revit and ArchiCAD, or architectural add-ons, such as Autodesk's Architectural Desktop or Bentley's Triforma. The results, though often powerful, can be expensive.

Bricsnet has taken a hybrid approach, balancing power, elegance, and expense. Architecturals' 3-D solid modeling comes from ACIS, a "kernel" technology recently acquired by the makers of the modeling software that Frank Gehry uses. The architectural awareness derives from an underlying technology base that Bentley licensed for Triforma. Both the 3-D modeling and the architecture intelligence are applied by Bricsnet to IntelliCAD, a 2-D clone of AutoCAD that is licensed from the Visio subsidiary of Microsoft. The corporate lineage may sound unduly complex, but the resulting product is not.



ENCAD CADJET 3D Printer Plotter

Any architect buying a first CAD program or switching from older-generation CAD to newer, integrated 2-D/3-D, intelligent modeling approach owes herself a serious trial run with Bricsnet Architecturals for IntelliCAD.

System requirements: Pentium CPU at 450 MHz or better, running Windows 98/NT; 64MB RAM (128 MB preferred); SVGA display; CD-ROM. Bricsnet USA, 53 Green Street, Portsmouth, N.H. 03801; 603/436–6868; www.bricsnet.com.

Welcome aboard
DataCAD Plus Drawing Board Edition

Common criticisms of CAD include disruption of normal hand-eye coordination and the awkwardness of the mouse as a drawing instrument. Both problems can be solved with a penlike digital stylus used directly on a touch-sensitive screen display. When drawing surface and display surface are thus recombined, the result feels a lot more like drawing on paper, an experience even the most digitally adept still relish. From MIT's Sketchpad in the 1960s to the University of Colorado's Digital Cocktail Napkin in the 1990s, such direct input has been the exclusive province of academic researchers. However, price-performance breakthroughs in computer power and touch-screen technology now make commercialization affordable.

DataCAD LLC is offering its latest DataCAD Plus software in a Drawing Board Edition (DBE), bundled with a WacomPL400 LCD Pen Tablet (the same touch-sensitive device that Nemetschek, the leading CAD vendor in Germany, markets there as its "dBoard"). DataCAD Plus combines elements familiar from "classic" DataCAD [MARCH 2000, page 188] with advanced features, such as "zone-based architectural construction" and built-in rendering



Onsite View Autodesk

and visualization, contributed by DataCAD's strategic partner, MB Software of Germany. For several years DataCAD's U.S. competitor, Sigma Design International, has touted the benefits of running its software, ARRIS CAD, on touch-screen laptop PCs, but DataCAD goes further. Rather than just installing the mouse/monitor version of its software for DataCAD Plus DBE, the company modified the on-screen interface to exploit the characteristics of the stylus/drawing board format.

Although seemingly one small step for DataCAD, this is a giant leap for "CADkind" and represents a significant future direction likely to be followed by all CAD software. Already Autodesk, maker of AutoCAD and Architectural Desktop, has launched a top-secret interface development (with no scheduled release date) called StudioDesk, replete with digital equivalents of felt-tip markers and rolls of yellow trace. For now, DataCAD Plus DBE offers real-world productivity, outstanding architectural modeling, and intelligent software objects, all bundled with the user interface of the future.

System requirements: Pentium II or better CPU with Windows 95/98/NT4.0; 64MB RAM (128 MB preferred); 425MB free disk space; CD-ROM drive. DataCAD LLC; 20 Tower Lane; Avon, Conn.; 860/677–4004; www.datacad.com.

Some day my prints will come
ENCAD CADJET 3D large-format color printer

Anyone who's been around the graphic-arts business recently or was involved in CAD through the early to mid-1990s will recognize the name NovaJet as one of the pioneering brands in high-quality color ink-jet printing/plotting technology. Manufacturer ENCAD briefly shifted its focus away from CAD and lost significant market share to arch rival Hewlett-Packard (HP). The CADJET 3D squarely targets that imbalance, with feature-for-feature excellence across the board.

At 36 inches wide, the CADJET 3D can produce up to "E" size drawings on a wide variety of paper media, from plain bond to photogloss, including the kind of heavy stock that architects often prefer for presentations and covers.

Print speed includes a fast SuperDraft mode, although even the full 600 dpi mode is competitively swift. Large ink reservoirs assure low maintenance. Software drivers and printer emulators cover the gamut of HP, Windows, CAD, Postscript, and PDF formats. A direct network connection is included, and all control functions can be administered via a Web browser.

The CADJET 3D's low cost of consumables (ink and media), combined with aggressive first-cost pricing, makes it a strong contender to usurp a gap in the Hewlett-Packard lineup, a price-performance point that holds special appeal for mid-size and larger architectural firms.

System requirements: 10/100 Ethernet connection (RJ45); Windows95/98/NT4.0/2000. ENCAD, Inc. 6059 Cornerstone Court West, San Diego, Calif. 92121; 800/45ENCAD; www.encad.com.

WWW *For more reviews of technology products for architects, go to* ***Digital Architect*** *at:* ***www.architecturalrecord.com***

A PROJECT THIS AMAZING DEMANDS A SOFTWARE THIS INCREDIBLE



Bringing sixty creative minds together to design complex projects like Seuss Landing Retail Stores* requires the **ingenuity** and **experience** of AAD. Transforming 1680 monthly time records into knowledge that helps AAD better manage 375 projects a year requires the **power** and **integration** of the award-winning Wind2 Financial Management System. From real time project reporting and budgeting to fully integrated financial accounting, Wind2 provides AAD with the tools it needs to keep them on schedule and profitable in today's demanding design world.

*Seuss Landing Retail Facility
Universal Islands of Adventure, Orlando, FL
Photo: Michael Norton Photography

Helping to Make it Possible

Designed for Microsoft® Windows NT® Windows® 98

Designed for Microsoft® Windows NT® Windows® 95

Microsoft® OFFICE 97 Compatible

Named "Best Packaged Application" in Microsoft's 1998 Visual Fox Pro Excellence Award Competition.

Wind2®

The Number One Provider of Project Accounting Software for the Professional Services Firm

Call 1.800.779.4632 today for a CD demo or visit us at www.wind2.com

CIRCLE 66 ON INQUIRY CARD

F.W.DODGE

Outlook 2001

Executive Conference

October 17-18, 2000 • Renaissance Mayflower Hotel • Washington, D.C.

Build on Our Information.

In the construction industry, effective strategies for growth depend on capitalizing on key industry trends. Maximize your company's opportunities by attending the ***Outlook 2001 Executive Conference*** and get the information you need to build on your organization's future.

This year's conference will address vital issues such as:

- How will the powerful economic forces at work today affect construction activity?
- Which sectors of the construction industry offer the most near-term opportunity?
- Which of the political, social and environmental trends in our national and global society will most affect our industry in coming years?
- Where will technology take our industry next?

Sponsored by:

BENTLEY

Builder

BuildPoint.com

CMI Communications Management International, Inc.

GE Capital Modular Space

www.800cmi.com

Hertz Equipment Rental

CNA PRO

The Construction Specifications Institute

PRIMAVERA How the world manages projects







Key speakers include

The McLaughlin Group
Public Affairs Television Show

Roger Staubach
Chairman & CEO, The Staubach Company and Former Dallas Cowboys Quarterback

Robert Murray
V.P. Economic Affairs, The McGraw-Hill Construction Information Group

Other featured speakers:

David Wyss
Chief Economist, Standard & Poor's *DRI*

Kermit Baker, Ph.D.
Chief Economist, The American Institute of Architects

Take advantage of this unique opportunity

Register now for the most influential executive conference in the construction industry.

https://outlook2001.800cmi.com

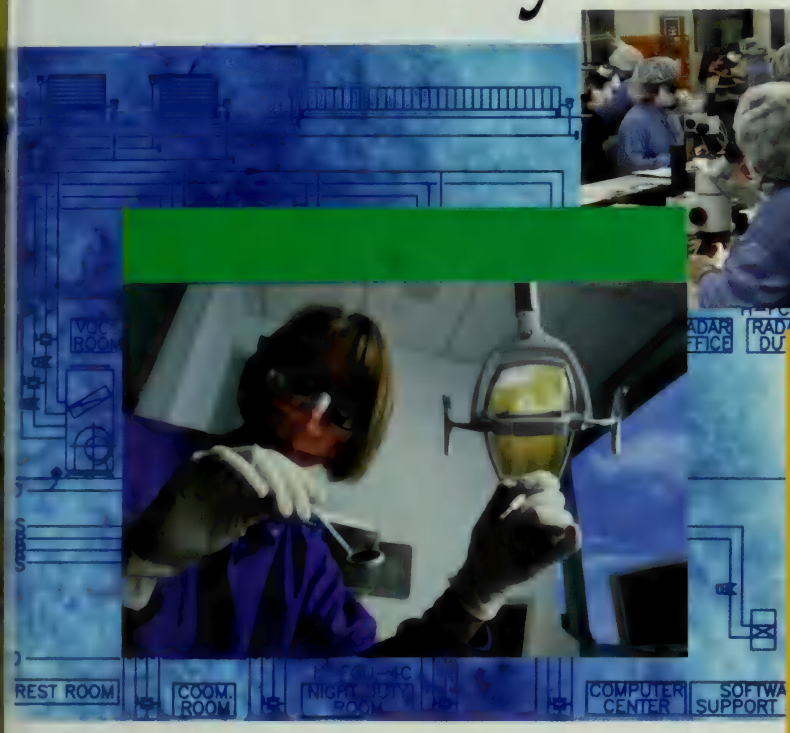
(800) 847-4374

construction.com
The Construction Marketplace

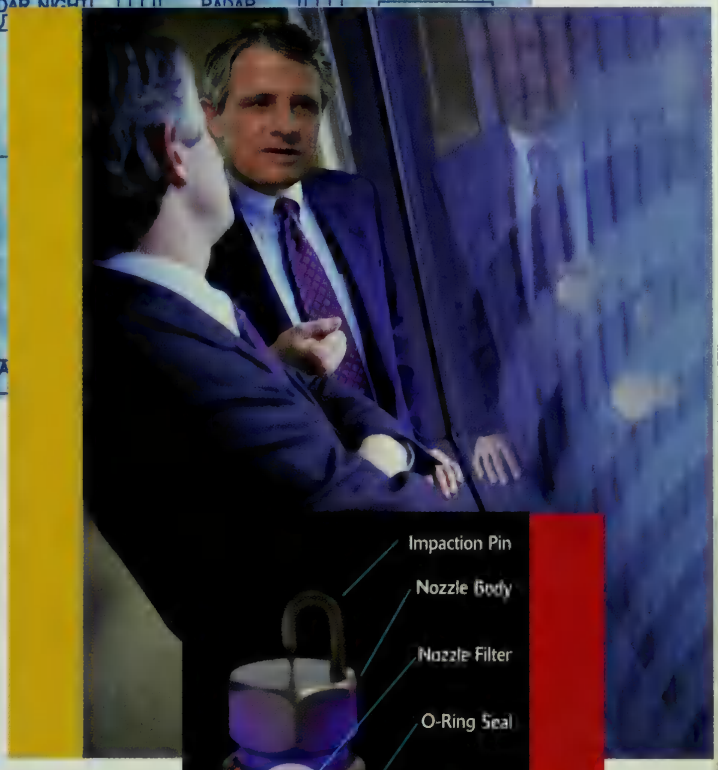
McGraw-Hill Construction Information Group
F.W.DODGE ARCHITECTURAL RECORD Sweet's Group ENR Design/Build
A Division of The McGraw-Hill Companies

CIRCLE 67 ON INQUIRY CARD

Save your energy. Humidify with Mee Fog.

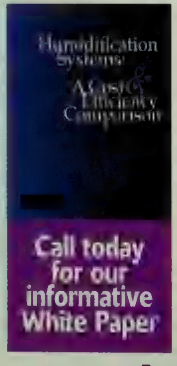






Mee Fog high pressure humidification systems can help you meet tougher IAQ standards far more cost-effectively than other humidification methods. The concept is simple. High pressure water is forced through the special Mee Fog nozzles, which atomize the water into billions of quickly evaporating micro-fine fog droplets. No heat or compressed air is needed.

Dramatic energy savings.
By using just one horsepower to atomize 500 lbs of water, Mee Fog uses a mere 3% of the energy of compressed air systems and less than 1% of steam. Year after year, the energy savings are nothing short of extraordinary.



First-cost savings, too.
Mee keeps equipment and labor costs down, as well . . . especially in sites where 200+ lbs. of water/hr. are needed.

Proven safe and effective for new installation and AHU retrofits.
Mee Industries brings a great deal of experience to commercial building humidification. Our high pressure fog technology is mature and has been field proven in numerous applications for decades. Founded in 1969 by former Cornell University research scientist and atmospheric physicist Thomas Mee, Mee Industries wrote the book on high pressure fog humidification.

Are you talking to Mee?

626-359-4550
800-732-5364

www.meefog.com

MEE INDUSTRIES INC.

CIRCLE 69 ON INQUIRY CARD



Slips and falls are serious business. ■ Altro knew this over fifty years ago when we created the original safety flooring. And today, we understand the many factors you must consider during the flooring selection process. Due diligence. Current legislation. Limiting liabilities. Life cycle costing. Reducing slip and fall accidents. ■ Safety flooring is our specialty. Helping you make the right choice is our priority. ■ Altro manufactures the world's best sheet vinyl safety flooring with superior slip resistance, long-term durability, Easyclean Technology™ and great aesthetic appeal. ■ In addition, we offer complimentary consulting, custom specifications, technical support and extended warranties. Altro — the safe choice — for all the right reasons. ■

ALTRO SAFETY FLOORS

Toll-Free: 1-800-565-4658 Web Site: www.altrofloors.com E-mail: info@altrofloors.com

CIRCLE 70 ON INQUIRY CARD

New Products

Interior finishes have the power to create illusions and manipulate surfaces through texture and light. Whether it is a paint that changes color before your eyes, a panel with fabric suspended in the middle, or a ceiling that mimics the night sky, these products and materials can help you to create a little magic in any interior space. *Rita F. Catinella*

Materials adapt to fit in with the in crowd



Designers Nancy Mah and Scott Kester, partners of New York City–based Nancy Mah Design, have created the newest hot spot in the meatpacking district of New York—Lotus. The supper club is already an A-list location for society events, promotional parties, and celebrity sightings.

The 10,000-square-foot, three-level space features natural elements such as metal, wood, and stone, as well as some man-made materials, used in unusual ways to create an exotic atmosphere. The design team worked with Mark Richey Woodworking to create the club's custom millwork. In a lounge (top right), solid poplar blocks are stacked and held together by wooden pegs, creating a open screen lit from both the front and the back. The blocks were cut into three-inch pieces from a large section of wood and then stacked. To design the millwork along a mezzanine railing (visible far left), sections of Luaun mahogany plywood were cut into lozenge shapes and stacked. Behind the bottles at the back of the bar (bottom right), a thin veneer of figured European ash is laminated to Plexiglas and illuminated, revealing a wood grain. The yellow strip along the bar is backlit ivory-colored Plexiglas.

To create the glowing yellow wall by the staircase and custom hanging pendants, the designers turned to Norplex, a textured fiberglass product normally used on circuit boards. Downstairs, an original wall was sandblasted and preserved with a sheet of glass. Stone Source provided the patchwork limestone for the other walls and floors; the limestone is honed where it is lighter and flamed (heated, then hammered to create a coarser finish) where darker.

The staircase's geometric metal screen pieces were cast in a foundry in New Jersey, bead-blasted, then installed using steel supports to hold up each aluminum section. Other elements of the staircase, assembled by Brooklyn-based Metal Dimensions, include stair treads of two-inch-thick pieces of clear Plexiglas, and a steel-and-Plexiglas banister.

978/768–3356. Mark Richey Woodworking & Design Inc., Essex, Mass. **CIRCLE 200**

800/350–9490. Industrial Laminates/Norplex Inc., Postville, Iowa. **CIRCLE 201**

212/979–6400. Stone Source, New York City. **CIRCLE 202**

718/486–5434. Metal Dimensions, Brooklyn, N.Y. **CIRCLE 203**

Process transforms smooth Corian into custom-textured surface

DuPont and Allegheny Solid Surface Technologies have announced a new product, DuPont Textured Surfaces. The surfaces, developed using a new patent-pending fabricating technology, incorporate several traditional manufacturing methods in a new way.

"The process was generated from playing with the material and years of experience," says Allegheny president Russell E. Berry.

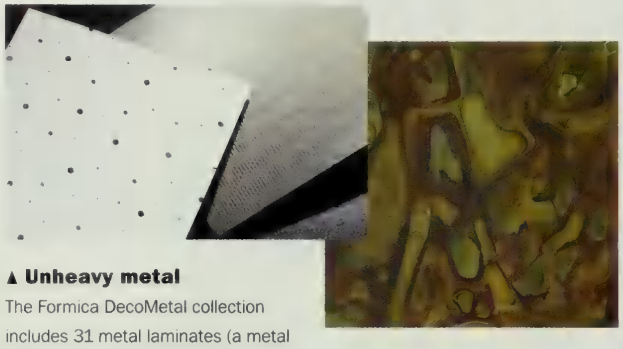
With a combination of traditional molding techniques and a new heating and pressing process, virtually any found or imagined texture, from organic to industrial, can be meticulously created in solid surface. Not only can Corian take on the look of large geometric squares, raised circles, and grids, but it can replicate an array of materials with great detail: paper clips, the small veins in a leaf, or even the pattern of a piece of fabric.

While in the past solid surfacing has been differentiated by color and particulate size, the material can now be designed for texture and pattern to coordinate with fabrics, wall coverings, stone, metal, or tile.

The product is being marketed on a limited basis to a group of design professionals who participated in the development of these textures. The actual development of products and services is ongoing and should be complete by late fall of 2000. Product and service offerings will debut by the end of the year. 800/4-CORIAN. DuPont Corian, Wilmington, Del. **CIRCLE 204**



Panels of Corian with various textures.



▲ Unheavy metal

The Formica DecoMetal collection includes 31 metal laminates (a metal surface bonded to a phenolic backing) and 17 solid metals. Intended for light-duty horizontal and vertical applications, the collection features Orbit Aluminum, Micro Perf Aluminum, and Copper Sargasso (shown clockwise above). The five new natural-aluminum solid metals are ideal for casework, wall panels, and cabinetry. 800/FORMICA. Formica DecoMetal, Cincinnati. **CIRCLE 205**

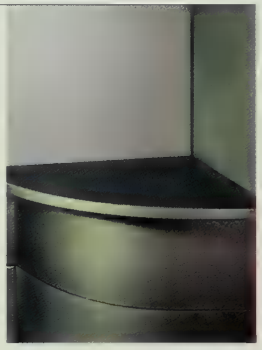


◄ Glassy lady

Laurinda Spear, FAIA, adds to her growing array of home, office, and building products with a new collection of architectural glass for Skyline Design. Six designs offer both large- and small-scale variations, and most designs are available in textured, clear, and etched finishes. All large-scale etched patterns are protected by Skyline Etch Sealer, and textured clear designs are offered in either custom colors or in one of five color selected by Spear. 888/278–4660. Skyline Design, Chicago. **CIRCLE 206**

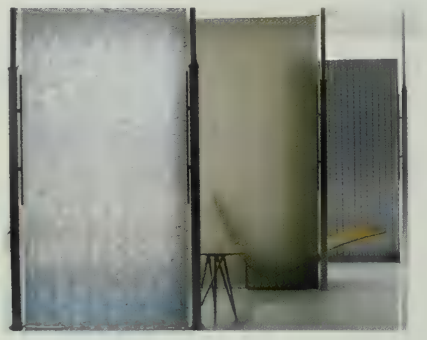
► Moving finish

Kinesis is an interior speciality finish that creates a dramatic "color-travel" effect on commercial walls. With Kinesis, different colors are seen depending on the viewing angle and the wavelength of light being reflected. The water-based chemical formula is low in VOCs (less than 80), mildew-resistant, and virtually odorless. Kinesis can be applied to almost any substrate. 323/980–1250. Surface Protection Industries, Inc., Los Angeles. **CIRCLE 207**



► Hard, translucent surface material

Imago, developed by Suzanne Tick for Knoll Textiles, is a family of products made through a patented process that encapsulates fabric in an engineered resin for use in both vertical and horizontal applications. Capturing many visual aspects of glass, but at half the weight, Imago can be fabricated using woodworking tools and formed under moderate heat to create both soft curves and hard angles. Sold in four-by-eight-foot sheets, it will not shatter and is resistant to scratching and fingerprints. Imago will be introduced in eight patterns in a total of 24 color choices and six thicknesses. 800/343–5665. Knoll Inc., East Greenville, Pa. **CIRCLE 208**





▲ Star sighting

To create the starlight effect for the ceiling of San Diego's Museum of Photographic Arts cinema theater, approximately 3,000 fiber-optic lights were incorporated into a series of five arches staggered in height and size from the back of the theater to the front. Luxalon Curved Metal Plank was used to create this challenging system of overlapping "clouds" that were not to touch one other or the front or side walls. 800/366–4327. Hunter Douglas Architectural Products Inc., Norcross, Ga. **CIRCLE 209**

► Opening up doors for laminate

VT Industries has introduced its first collection of high-pressure laminate designs, selected specifically for architectural doors. With its 50 laminate designs, Architectural Door Collection 2000 is a cooperative effort of VT Industries and Wilsonart International. The collection features six design groups, dominated by a series of 17 natural-looking wood-grain patterns. Several of the designs are available with premium finishes that enhance both their look and feel. The edge-before-face design on VT laminate doors locks in the edge laminate, avoiding chips and delamination. 712/368–4381. VT Industries, Holstein, Iowa. **CIRCLE 210**

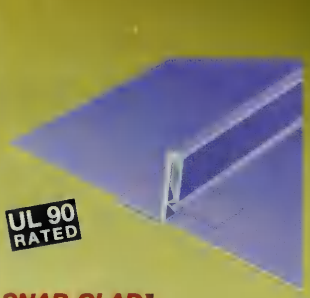


MAJOR LEAGUE MATERIAL

SNAP-CLAD™
Metal Roofing Panels

Petersen Aluminum Corporation's SNAP-CLAD Panels top the new $4.75 million press box and stadium club, completing an eight year long renovation of the 48-yr-old Rosenblatt Stadium in Omaha, Nebraska. The stadium plays host to the NCAA College World Series and serves as home field for the Omaha Royals. The new press box features a peaked metal roof, which dramatically altered the exterior appearance of the stadium. Boone Brothers Roofing Inc. in coordination with the general contractor, Weitz Company, Inc. installed over 11,000 square feet of SNAP-CLAD Panels manufactured by Petersen Aluminum Corporation. The panels are a custom blue PAC-CLAD finish and were corrective leveled to provide superior panel flatness. Color and panel appearance was critical considering the prominence of the roofing panels in the stadium design.

For more information on SNAP-CLAD Panels, please contact Petersen Aluminum Corp. **Call 1-800-PAC-CLAD or visit our redesigned web site featuring new online ordering @ www.pac-clad.com**

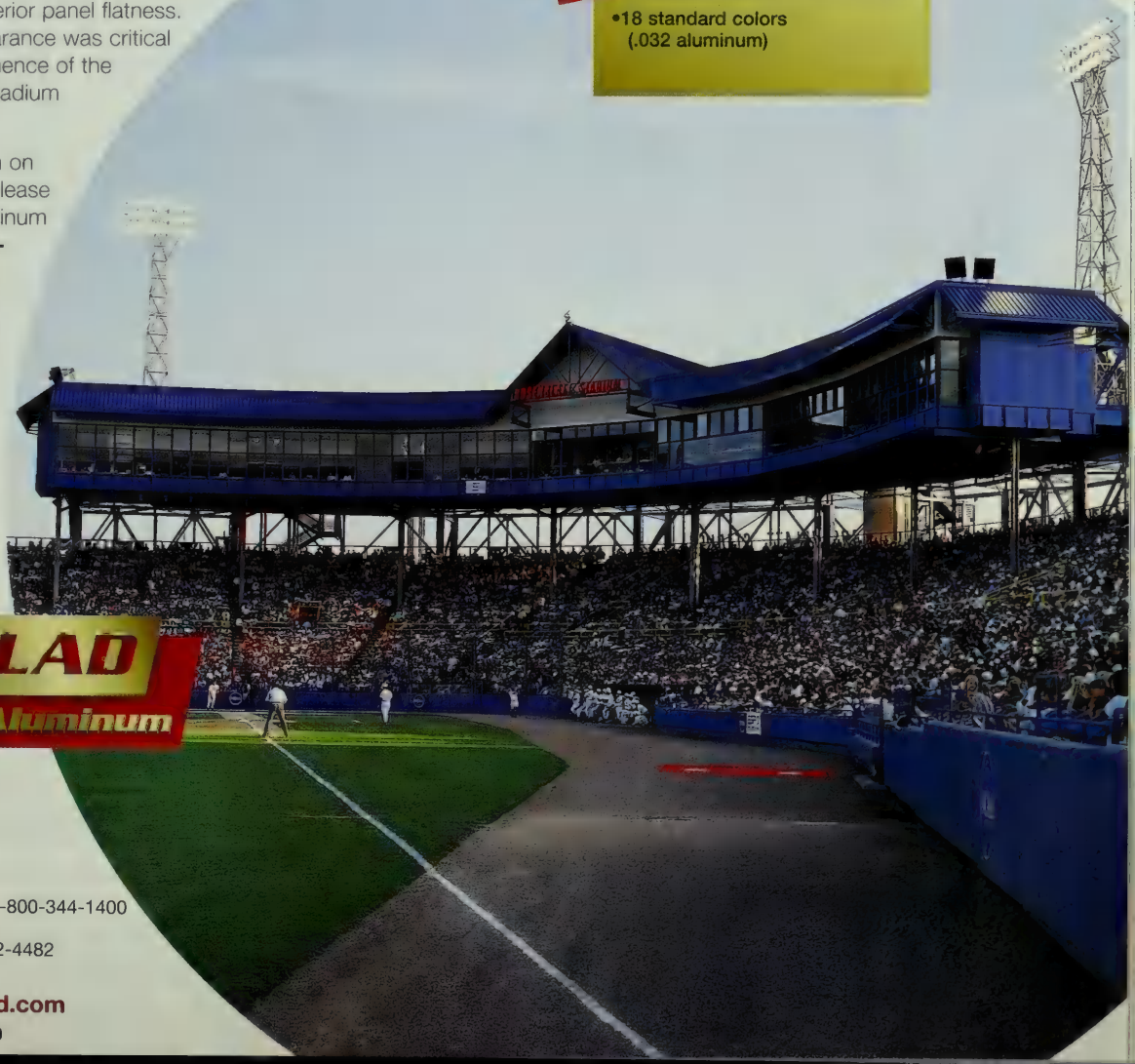


SNAP-CLAD™

10", 12", 16" or 18" O.C. 1-3/4" high
.032 alum., 22 ga. or 24 ga. steel

Features

- Herr-Voss corrective leveled
- UL 90 rated
- Factory-applied sealant
- Continuous interlock
- Labor-saving one-piece design
- 20-year non-prorated finish warranty
- 30 standard colors (24 ga. steel)
- NEW 11 standard colors (22 ga. steel)
- 18 standard colors (.032 aluminum)



PAC-CLAD
Petersen Aluminum

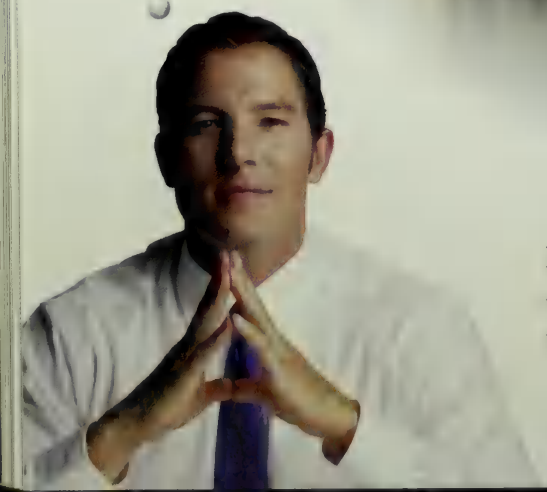
1005 Tonne Road
Elk Grove Village, Il 60007
1-800-PAC-CLAD
FAX: 1-800-722-7150 or
1-847-956-7968

Other Plant Locations:
Annapolis Junction, MD: 1-800-344-1400
Tyler, TX: 1-800-441-8661
Kennesaw, GA: 1-800-272-4482

NEW **Order online!**
http://www.pac-clad.com

CIRCLE 71 ON INQUIRY CARD

Because the Best Windows Are Built Out of Your Imagination

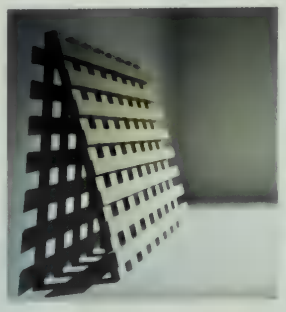


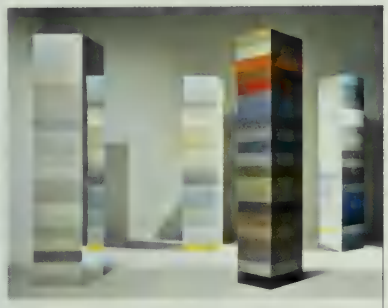
For a FREE catalogue on Kolbe & Kolbe wood or vinyl windows and doors, call 1-800-955-8177 or visit us on the World Wide Web at www.kolbe-kolbe.com.

Kolbe & Kolbe
Millwork Co., Inc.

CIRCLE 72 ON INQUIRY CARD

Products Briefs





▲ Solid color palette

Using architectural elements as his theme, architect Ettore Sottsass created 14 abstract sculptural forms using DuPont Corian as the primary material for the exhibition *Exercises in Another Material*, held for one night during NeoCon at the Museum of Contemporary Art in Chicago. Sottsass used the reorganized Colors of Corian color palette to create pieces such as *Bars and Pillars*. The exhibition is currently on a global tour. 800/4–CORIAN. DuPont Corian, Wilmington, Del. **CIRCLE 211**



▲ Transformer box

Los Angeles–based architecture and design firm Touraine+Richmond was commissioned by a film director to design a custom storage system that houses 4000 CDs and 1500 LPs. The 11-foot-by-4-foot-by-30-inch steel structure is clad with MDF birch panels from Mexico, laminated with aluminum sheets. The box mutates into a conference table and other uses through hydraulic pistons and touch-latch mechanisms. 310/399–2782. Touraine+Richmond, Venice, Calif. **CIRCLE 213**

► Built-in coffee bar



With the touch of a button, Miele's built-in coffee system offers a choice of coffee, espresso, even cappuccino or latte, made with a steam wand that foams and froths milk. An easy-to-read indicator display shows multiple functions in any of seven languages. Miele also introduces a convection steam oven, which has an injection steam system that provides consistent cooking results on all levels and a temperature-control sensor that monitors and maintains the proper temperature. 800/843–7231. Miele Inc., Princeton, N.J. **CIRCLE 215**



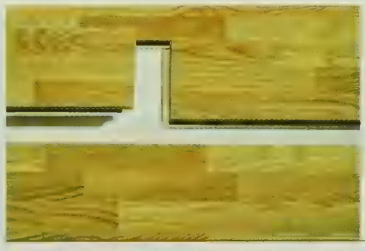


► ABC's of DDC

Domus Design Collection (DDC) has opened a new showroom designed by legendary architect Philip Johnson. The 28,000-square-foot space covers two levels of a landmark New York Art Deco building. Johnson's design creates a series of spaces inside the windows along the Madison Avenue and 34th Street sides of the building, permitting an array of vignettes separated by the folds of the interior construction. The Step Wall System (top left) from Frighetto Industrie is one of many contemporary pieces on display. 212/685–0800. DDC, New York City. **CIRCLE 212**

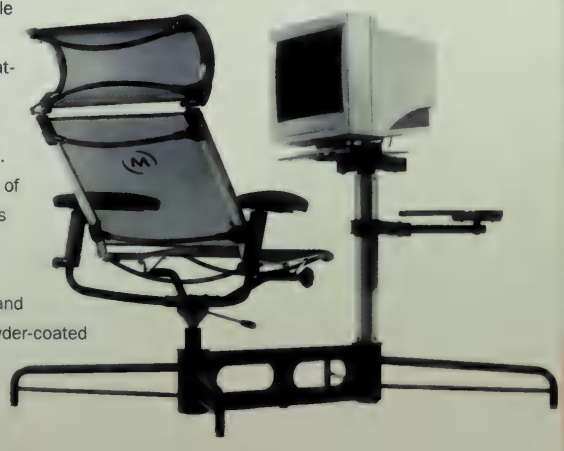
▼ Snappier flooring

Alloc Original Flooring is a high-pressure laminate flooring with a mechanical locking system that eliminates the need for glue during installation. Alloc Original features an aluminum scarf joint and waxed-sealed edges for a complete, ready-to-install floor. The flooring is ideal for areas with light to moderate traffic, including offices, reception areas, bars, and hotel rooms. 877/DO-ALLOC. Alloc Inc., Racine, Wis. **CIRCLE 214**



▼ Center of your own universe

The Microsphere ergonomic workstation places the user at the center of a flexible computing micro-environment, including a chair with adjustable armrests, footrest, headrest, monitor platform, keyboard platform, and cable management system. With a base footprint of just 2 ½ by 5 feet, it is crafted of breathable mesh upholstery, anodized aluminum and steel, with either powder-coated or chrome finishes. Future options include additional writing surfaces, CPU stand, and accessory platforms. 604/605–3225. Microsphere Inc., Vancouver. **CIRCLE 216**



Product Briefs



◄ Design from the bottom up

The look of the Designer Solarian flooring line is achieved through Armstrong's Inlaid Color process. The process begins with an artist's sketch, which is translated into handmade stencils. Millions of tiny color granules are applied in layers from the base up, until the pattern emerges. 888/ARM– STRONG. Armstrong World Industries, Lancaster, Pa. **CIRCLE 217**

► Industrial-strength fittings

The faucets, fittings, and accessories in the Industrial Luxe Collection were designed by Thomas O'Brien of Aero Studios as an update of commercial and industrial bathroom fittings. The collection features a smooth arc to the spout and a dome-shaped base, and will be available in chrome or matte chrome. The line also includes wall- and sink-mounted kitchen faucets and handles. 203/546–6000. Waterworks, Danbury, Ct. **CIRCLE 218**





▲ Tile of a different style

The Mörse tile range (above left), made from high-polished cast aluminum, can be used on both exteriors or interiors. The four main large-format designs can be assembled in a vast number of configurations; smaller tiles add more flexibility. The Lëwis large-format tile (above right) is precision-cut from brushed stainless steel. All outside edges are chamfered for extra safety. The centers are high-grade vinyl laminate, but on larger commissions a wide range of colors and textures is available. 44/01372–378120. Idâdo Design Consultants, Surrey, U.K. **CIRCLE 219**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



digital wide format

The wide-body with the wide range of features. The Ricoh FW7030D. Multiple copies at a fast speed of 15.7 fpm. It features R/E from 25 to 400%, up to 400 dpi, 32-level grayscale, positive-negative reverse, mirror image and much more. A controller software option provides full network connectivity.

© 1999 Ricoh Corporation.

Product Briefs



▲ Making a stand

This year's United States Pavilion, part of the Venice Architecture Biennale through October 29, is equipped with Zero's architectonic system of structures and furniture. Among the item's in use in the pavilion are Zero's panels, trusses, working tables, accessories, and other furnishings. 401/724–4470. Zero U.S. Corp., Lincoln, R.I. **CIRCLE 221**

▼ Stone cold design

The Natural Stone Collection consists of granite, marble, travertine, limestone, and slate options. Tiles should be sealed prior to installation to make the stone less porous and more stain resistant, thus preventing grout and easing clean up. Natural Stone Collection tiles can be given a synthetic wax finish. 214/398–1411. Daltile Corporation, Dallas. **CIRCLE 220**







◄ Welcoming furnishings

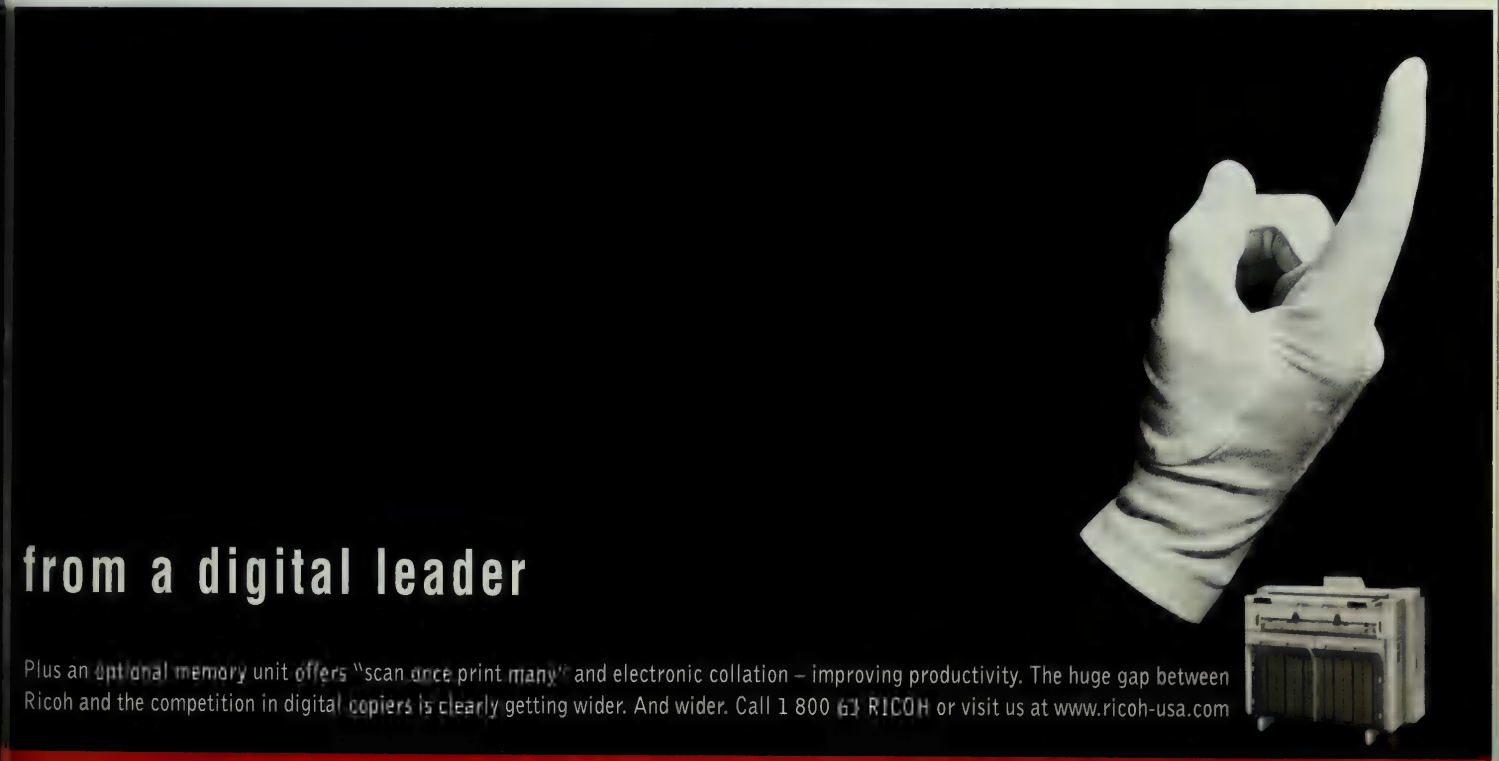
Online retailer REALfurniture.com has launched its first collection of decorative accessories, including a coat-hanger system and umbrella stand. The stainless-steel stand, measuring 10 by 10 by 24-inches, was designed by Italian architects Maurizio Martinelli, Gabriella Dorligo, and Giovanni Andrea Panizon. 212/604–0900. REALfurniture.com, New York City. **CIRCLE 222**

► Avoid office headaches

The Easy-Down hydraulic damping system slows the speed at which overhead doors close. The device is hidden from view inside the cabinet and does not alter the conventional movement of opening and recessing the door over the top of the cabinet. 562/903–0200. Accuride Intl. Inc., Santa Fe Springs, Calif. **CIRCLE 223**



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



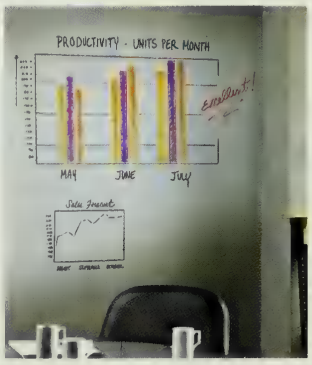
CIRCLE 73 ON INQUIRY CARD

Product Briefs

▼ Sliding scale

The Urbana carpet pattern, from Invision Carpet Systems, is offered in three scales: small, medium, and large (shown). This gives the designer the flexibility to choose the scale appropriate to the size of the space. Urbana is part of the Creative Visions Box 3 sampling system, a collection of eight products in various scales, patterns, and textures and a new color palette of 10 colorways. 706/279–2552. Invision Carpet Systems, Dalton, Ga. **CIRCLE 224**





▲ The writing's on the wall

MemErase dry erasable wallcovering may be either field- or factory-applied. There are three styles, including Whitewall in 62-inch and 54-inch widths; ColorWall, which offers eight colors in a 62-inch width; and the 62-inch-wide GraphWall featuring light gray gridlines. 800/457–9900. Omnova Solutions, Fairlawn, Ohio. **CIRCLE 225**

► Urbane design

The Urburbia collection, launched during ICFF this May, is a collaboration of some of New York's leading contemporary furniture designers. The Pixel sofa (right), chair, and ottoman set by Richard Shemtov features a deep recline, stainless-steel legs, and a textured wool upholstery. The Cyborg sideboard (below), designed by Nick Dine, is constructed of solid anodized aluminum with walnut–covered wood drawers. The aluminum shell rests on matching geometric funnel-shaped legs. 212/925–6171. Dune, New York City. **CIRCLE 226**





For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

FIREPROOFING WORTH THE LOOK!

A/D FIREFILM™ II

Decorative Thin-Film Fire Resistive Coating for Structural Steel

A/D FIREFILM® II combines ratings up to 3 hours with the appearance of exposed steel.

A/D FIRE PROTECTION SYSTEMS

Call 1-800-263-4087



Photo: Sacramento International Airport, Terminal A
Architect: Dreyfuss & Blackford Architects
Photo: Cathy Kelly Architectural Photography
A/D FIREFILM™ II on structural steel.

CIRCLE 74 ON INQUIRY CARD



The perfect kitchen should be limited by your imagination, not your appliances.

The complete Viking kitchen. It's designed to be attractive, not just to master chefs, but also to great architects, designers, and builders.

Viking products offer renowned performance and style in a variety of sizes, shapes, and configurations. Choose gas, dual fuel, or electric. Built-in or freestanding. Stainless steel or nine other finishes, with or without brass trim. It adds up to a kitchen that makes a statement.

But exactly what it should say we leave entirely up to you.

VIKING

Professional Performance for the Home™

Viking Range Corporation ▪ (662) 455-1200 • www.vikingrange.com

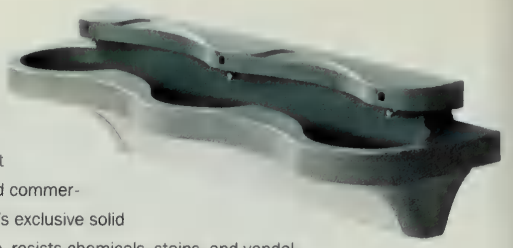
CIRCLE 75 ON INQUIRY CARD

Product Briefs



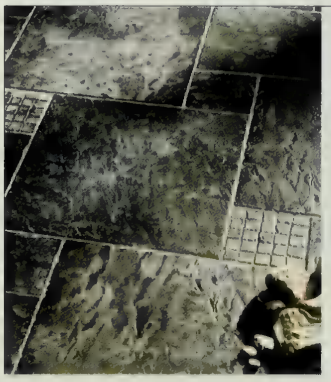
▲ Solitary refinement

Solitär, a line of executive case goods in the Teknion Wood line, features a back-bevel edge detail and mitered corners. Solitär's design combines wood, metal, and leather finishes on tables, credenzas, pedestals, and cabinets for the executive or home office. In addition to Solitär, Teknion is introducing five new wood side-seating lines and two wood-detailed lounge-seating lines. Teknion's full complement of upholstery options is available on the new seating lines. 877/TEKNION. Teknion Inc., Marlton, N.J. **CIRCLE 227**



► Three sinks, no waiting

Bradley designed its Express Image Lavatory System to meet the demands of high-end commercial washrooms. Bradley's exclusive solid surface material, Terreon, resists chemicals, stains, and vandalism. The system, which is available in a variety of colors, accommodates up to three users simultaneously while providing each user with the same personal space as individual lavs. 800/BRADLEY. Bradley, Menomonee Falls, Wis. **CIRCLE 228**



◄ Slatelike ceramic tiles

Tertiary Stone is produced in random shade variations, is fine-grained, and offers a naturally cleft appearance that replicates original slate. Tertiary Stone is available in four colors and a wide variety of sizes. Esquire ceramic tile collections feature large-format floor and wall tiles matched with complementary trim. 800/256–7924. Esquire, Clarksville, Tenn. **CIRCLE 229**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



CIRCLE 76 ON INQUIRY CARD



CIRCLE 77 ON INQUIRY CARD



YOU MIGHT FIND YOUR CREW STARING AT THE CEILING.
AND THEN YOU'LL PROBABLY JOIN THEM.

Ply-Bead gives you the timeless beauty of tongue-and-groove planking in durable, easy-to-install 4' x 8' beaded panels. Ply-Bead Classic with 1.6" on center grooves is perfect for rustic wainscoting, porch ceilings and wall treatments. So save time, money, and add the classic look that never goes out of style. Use Ply-Bead from Georgia Pacific. Call 1-800-BUILD-GP or visit www.gp.com.

CIRCLE 78 ON INQUIRY CARD

PLY-BEAD®

© 2000 Georgia-Pacific Corporation. All rights reserved. Ply-Bead is a registered trademark of Georgia-Pacific Corporation.

Georgia Pacific

PRODUCTS BEHIND SOLID SOLUTIONS

Product Briefs

▼ Magical fabric

DesignTex collaborated with Sommers Plastics to develop Presto Change-O!, a new material that consists of a urethane coating applied to a knitted polyester fabric. Light-interference pigments are incorporated into the urethane coating, resulting in a surface that catches the light in two spectrums. The fabric, available in 20 colorways, changes from one color to its companion color for that pigment (red to gold, green to copper) as you move past the fabric. Presto Change-O! meets or exceeds tests ranging from abrasion to flammability. 212/886–8136. One Plus One, A division of DesignTex, New York City. **CIRCLE 230**





▲ Beat the traffic

Abrasion-resistant HTS High Traffic System floor coatings provide durability for loading docks, machine shops, warehouse aisles, and other high-traffic surfaces. HTS coatings, which comply with VOC/VOS regulations, are moisture-cure urethanes combined with aluminum oxide, ceramics, and an abrasion-resistant polymer for 50 percent more mil-per-mil wear than standard urethanes. Eco-HTS is safe around odor-sensitive stock, while VOC HTS applies and cures easily. 888/727–8237. Tennant, Minneapolis. **CIRCLE 231**

► Technology-ready platform

The York FlexSys underfloor air system is designed for raised-floor applications and features the modular integrated terminal. Designed to accommodate change in building layout or loading, the air terminal units can be located and relocated easily, anywhere within the raised floor grid. 800/861–1001. York International Corp., York, Pa. **CIRCLE 232**



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



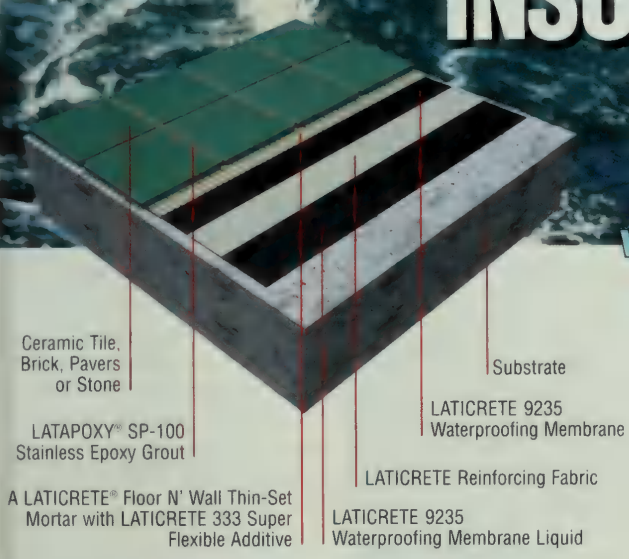
CIRCLE 79 ON INQUIRY CARD

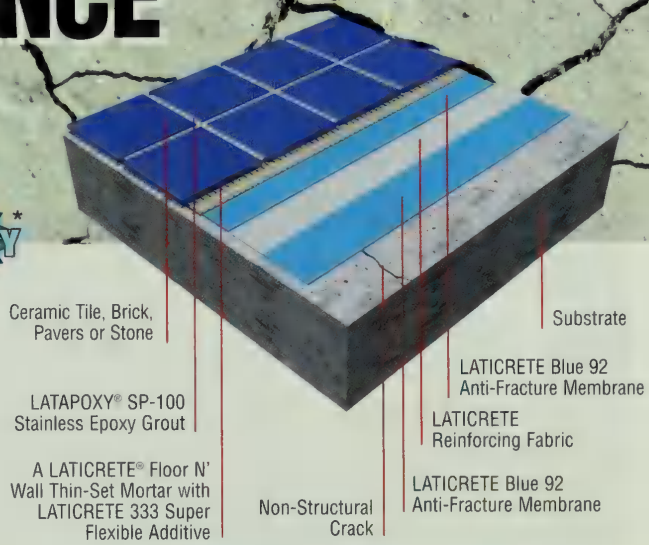


CIRCLE 80 ON INQUIRY CARD

Tile & Stone Waterproofing & Anti-Fracture INSURANCE

HASSLE FREE WARRANTY*





LATICRETE® 9235 Waterproofing Membrane

"The Architects' Choice for RISK FREE Installations"

- Guaranteed not to leak or crack*
- Dual purpose – for waterproofing *and* anti-fracture applications
- IAPMO, ICBO approvals
- Meets rigid DIN standard for anti-fracture membranes
- Full fabric application
- *Extra Heavy-Duty* Floor Service Rating
- Approved for continuous submersion in pools and fountains

LATICRETE Blue 92 Anti-Fracture Membrane

"When you only need anti-fracture protection"

- Guaranteed against cracking*
- Easy to install liquid applies like paint
- Full fabric application
- Meets rigid DIN standard for anti-fracture membranes
- *Extra Heavy-Duty* Floor Service Rating

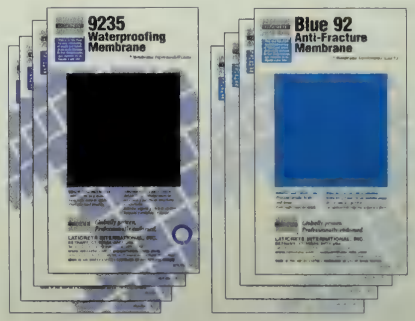
*See DS700.12 Hassle Free Lifetime Warranty for Additional Details.

LATICRETE®

Globally proven. Professionally endorsed.

LATICRETE INTERNATIONAL, INC.
1 LATICRETE PARK NORTH • BETHANY, CT 06524-3423 USA
TEL: (203) 393-0010 • (800) 243-4788
FAX: (203) 393-1684 • FAX ON DEMAND: (800) 359-3297
www.laticrete.com • support@laticrete.com

LATICRETE MIDDLE EAST
TEL: (971) 4-286-2627 FAX: (971) 4-286-2123
LATICRETE ASIA PACIFIC
TEL: (65) 262-4237 FAX: (65) 262-3701
LATICRETE EUROPE
TEL: (39) 0585-856-159 FAX: (39) 0585-856-160
LATICRETE LATIN AMERICA
TEL: (203) 393-0010, EXT. 218 FAX: (203) 393-1684



For an actual sample of these membranes absolutely FREE call 800-243-4788, Ext. 265.

Please specifiy 9235 or Blue 92 Swatch Card.

© 2000 LATICRETE INTERNATIONAL, INC. ■ T.M. Reg. U.S. ■ Foreign Pat. Office A-978 REV ■

CIRCLE 110 ON INQUIRY CARD



Modern Masters of Architectural Timbers

The G.R. Plume Company sets the standard for integrating the beauty of natural wood into today's architecture. Our masterful architectural timbers grace distinctive homes and businesses around the world. We provide beautiful and ingenious solutions, insightful collaborations, and a thorough understanding of wood and its applications. Our twenty years of creative and technical woodworking expertise can help you realize your architectural vision. For more information,

call (360) 384-2800.



THE G.R. PLUME COMPANY
ARCHITECTURAL TIMBER DIVISION

CIRCLE 81 ON INQUIRY CARD

Product Literature

Tile sample kit and binder

GranitiFiandre has introduced the Geologica sample kit with 33 samples. The Geologica binder contains catalogues, a fan deck, a CD-ROM, and four samples that show products in polished, matte, semi-matte, and textured finishes. The CD-ROM offers a catalogue of all Graniti-Fiandre products, plus a layout program that allows designers to click and design right on screen. 888/903-4263. GranitiFiandre, Itasca, Ill. CIRCLE 233

Lighting control catalogue

A new product catalogue from Leviton's lighting-control division describes the company's extensive lighting-control product offerings. The catalogue is divided into sections for architectural dimming systems, lighting controls, occupancy sensors, and Decora Home Controls automation products. 800/824-3005. Leviton Manufacturing Co. Inc., Little Neck, N.Y. CIRCLE 234

Fire-rated framing brochures

Technical Glass Products has just released two new fire-rated framing systems brochures. Each four-page brochure features full-color installation photography, product descriptions, listing information, and general characteristics of Fireframes by Forster. 888/397-3473. Technical Glass Products, Kirkland, Wash. CIRCLE 235

Expansion joint brochure

A new detailed brochure highlights the JointMaster architectural joint systems. A variety of product combinations and finish and installation options are highlighted. A "Frequently Asked Questions" page addresses basic expansion joint concerns. 800/222-5556. InPro Corporation, Muskego, Wis. CIRCLE 236

NEW SITES FOR CYBERSURFING

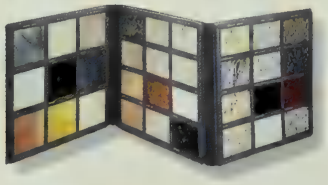
Order samples online for Bentley, Interface, and Prince Street carpet products **www.TheSampleCenter.com**



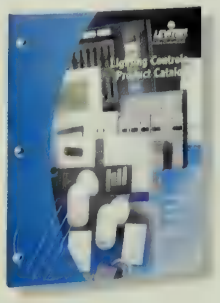
Provides manufacturers with Web-based rendering technology for showcasing fabric, texture, and color combinations for product lines **www.styleclick.com**

Exterior home design visualization software **www.exteriorfx.owenscorning.com**

New tile site **www.walkerzanger.com**









For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



Introducing Gold Guard. A barrier against moisture, not design.

Despite misconceptions, EIFS provides a better moisture barrier than other claddings. Now we've taken it even further. Introducing Sto Gold Guard — a moisture protection system that resists water penetration more than 5 times longer than leading brand house wraps and 28 times longer than conventional building paper. Gold Guard has two easily-applied steps (all you need is a trowel and a roller). And when combined with EIFS, you get seamless moisture protection for years. Now you can create memorable, lasting designs with EIFS without having to watch your...um...back. Start today by visiting our Web site at **www.stocorp.com** or calling **1-800-221-2397**.

sto

100% Acrylic Polymers

CIRCLE 82 ON INQUIRY CARD

STAAD.etc
ARCHITECT
Structural Component Design & Analysis
Base Plates • Columns • Footings • Retaining Walls • Slabs • Much More
• Friendly Wizard-like interface makes component design quick and easy.
• Spreadsheet-type input with dynamic graphics.
• Flexibility to change individual data units, customize rebar and databases.
• Automated step-by-step hand calculations.
Research Engineers International
CIRCLE 83 ON INQUIRY CARD
Timber, Masonry, Steel & Concrete Structures & Accessories
USA • UK • Germany • France • Canada • Japan • China
$1,495
Timber, Masonry, Steel & Concrete
web demo reinworld.com
FREE CD DEMO
800-FOR-REE
reinworld.com
Architect Friendly
Indian Chiefs Also Available

Product Literature

Line of quiet windows

Milgard offers new Quiet Line sound-control window brochures. Four two-page brochures feature Milgard's latest development in reducing environmental noise, particularly well suited for use near freeways or airports. Each brochure focuses on a different style of window: slider, double-hung, casement, and picture. All include product descriptions, features, specifications, and options. 800/MILGARD. Milgard Windows, Tacoma.
CIRCLE 237

Remodeling skylights

A full-color idea book from Velux-America features more than 20 remodeling design ideas using skylights in various rooms of the home; categories include Kitchens, Baths, and Vanities, Attics and Bonus Rooms, and Other Rooms. The book has full-color examples and architectural drawings of design styles incorporating skylights. 800/283-2831. Velux-America Inc., Greenwood, S.C. **CIRCLE 238**

Plaza construction techniques

A free, four-color brochure from the Dow Chemical Company offers architects, specifiers, and contractors guidelines for plaza construction, detailing the Protected Membrane Roof system, developed and patented by Dow more than 30 years ago. 800/441-4369. The Dow Chemical Company, Midland, Mich.
CIRCLE 239

New sampling device

Interface has introduced a new Sampling Box made from polypropylene that can be reused or recycled. The box contains the same sampling information found in traditional architecture folders, including a swatch card, a larger feeler swatch, and a card with all the specifics of the carpet. Shelf space was considered in the creation of the box: seven of the new boxes fit in the space of only three architecture folders. The outside label includes a photo of the carpet for easier identification on a designer's library shelf. Interface also introduces the "Sustainability Report Card," which provides designers and other specifiers with a framework in which to evaluate the full ecological impact of floor-covering products. The company plans to issue this report card and grading system with all Bentley, Interface, and Prince Street carpet products. The report card evaluates products on three levels: pre-life cycle, life cycle, and post-life cycle. 770/437-6800. Interface Inc., Atlanta.
CIRCLE 240

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

STAINLESS STEEL | 100% Recyclable



STAINLESS STEEL THE GREEN MATERIAL

A new Designer Handbook
FREE from the

Specialty Steel Industry of North America
STAINLESS STEEL INFORMATION CENTER
3050 K Street, N.W.
Suite 400
Washington, D.C. 20007
1-800-982-0355

www.ssina.com

CIRCLE 84 ON INQUIRY CARD

ARCHITECTURAL RECORD CALL FOR ENTRIES

Record Houses 2000

The editors of ARCHITECTURAL RECORD announce the 46th annual RECORD HOUSES awards program. This program is open to any registered architect. Work previously published in other national design magazines is disqualified. Of particular interest are projects that incorporate innovations in program, building technology, and use of materials. The entry fee is $50 per submission; please make checks payable to ARCHITECTURAL RECORD. Entries must also include plan(s), photographs (transparencies, slides, or prints), this entry form, and a brief project description, all firmly bound in an 8 ½-by-11-inch folder—postmarked no later than October 31, 2000. Anonymity is not necessary. Winning entries will be featured in the 2000 RECORD HOUSES Other submissions will be returned or scheduled for a future issue. Please include a self-addressed envelope with the appropriate postage, and allow 10 weeks for return.

Name of firm:_____

Address:_____

Phone:_____

Fax:_____

E-mail:_____

Contact person:_____

Name of project:_____

Location of project:_____

Agreement: We will not offer this project for consideration by another national design magazine during the 10-week review period at ARCHITECTURAL RECORD.

Signature:_____ **Date:**_____

Print name:_____

Submissions should be mailed to:
Sarah Amelar • RECORD HOUSES • ARCHITECTURAL RECORD
Two Penn Plaza • Ninth Floor • New York, NY 10121

This form must be included with your submission. If you have any questions, please E-mail Sarah Amelar at sarah_amelar@mcgraw-hill.com







Celebration! gallery

celebrating
life through
fine art



CONTACT:

GARY PRICE STUDIOS
38 WEST 200 SOUTH
SPRINGVILLE, UT 84663

T. 801. 489. 6852
F. 801. 489. 9588

www.garyprice.com
gary@garyprice.com

CATALOG AND
VIDEO AVAILABLE

CIRCLE 85 ON INQUIRY CARD







Dates & Events

Calendar

Restoration & Renovation
San Antonio
September 7–9
A trade show and conference dedicated to architectural rehabilitation, cultural landscape preservation, and historically inspired construction. Architects earn Quality Level 2 Credits. 800/982–6247

Promosedia
Udine, Italy
September 9–12
This is the only exhibition in the world dedicated wholly to seating. It is a meeting place for designers and the specialized trade, as well as a source of cultural, industrial, and artistic renewal focused on this basic item of furnishing. +39/0432–745611



CIRCLE 86 ON INQUIRY CARD

Samuel Mockbee: The Architecture of the Black Warrior River
New York City
September 9–October 21
Exhibition of architecture by Samuel Mockbee, whose work is characterized by the use of recycled and found materials. Max Protetch Gallery. 212/633–6999.

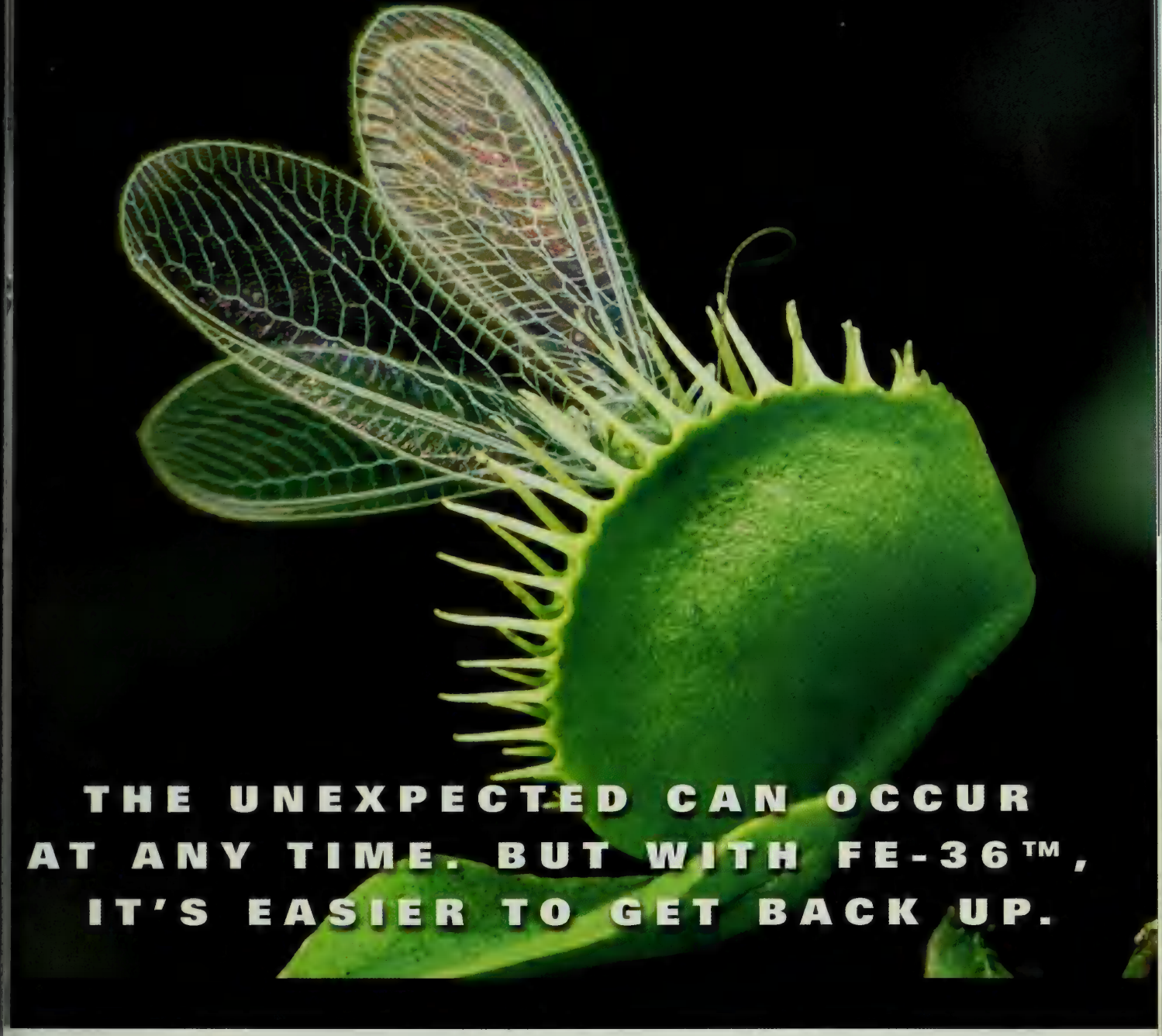
How to Lay out a Warehouse or Distribution Center
Kansas City, Mo.
September 11–12
This event is a short course offered by the University of Kansas. All attendees will receive a certificate of participation indicating that the short course provided 16 contact hours of instruction. Kansas City Marriott Country Club Plaza. 877/404–KUCE.

Designing Green Ideas
San Francisco
September 14
The educational symposium will feature three speakers discussing a spectrum of views on green design. The event is free and open to designers, architects, and the public. Attendees can earn .5 CEU credits, 10 CES learning units, or 5 contact hours. San Francisco Marriott. 800/222–5556, ext. 262.

AIA NYS Convention 2000
Brooklyn
September 21–24
Annual New York State Convention featuring keynote speaker Robert A.M. Stern, FAIA, continuing education seminars, a trade show, golf tournament, and architecture tours. 718/630–9898.

At the End of the Century: 100 Years of Architecture
Los Angeles
Through September 24
In 21 parts, this massive international exhibition organized by MOCA surveys countless architectural photographs, scale models, drawings, furnishings, clips, and artifacts. The Museum of Contemporary Art at the Geffen Contemporary. 213/621–2766.

Modern Living 2
New York City
Through September 26
After World War II, figures such as Eames, Nelson,



A fire is never good news. But if it results in significant downtime, it's worse. Which is why you need DuPont FE-36™ in your portable extinguishers. It leaves absoulutely no residue, which makes for less clean-up and greater uptime. Its low toxicity is good news for users and its lack of ozone-depleting properties is good for everyone. And FE-36™ is globally available and universally effective on every kind of fire, making it the best clean-agent extinguishant, anytime, anywhere. For more information, call 1-800-473-7790 or visit our website, www.dupont.com/fire.

DUPONT®

DuPont Fire Extinguishants

CIRCLE 87 ON INQUIRY CARD

Saarinen, and Aalto adapted industrial technology for the manufacture of rational, functional, and affordable domestic objects on display. The Museum of Modern Art. 212/708–9400.

Spacifically 2000
Los Angeles
September 26–28
A conference and exposition for spa-industry executives. The trade show is for spa, hotel, resort, beauty, health-care, and wellness-center executives, and any others related to spa business services. For information contact Nicole Davis at 212/647–0808.

NeoCon Canada
Toronto
September 28–29
Products and Services for the design and management of office, retail, hospitality, residential, health-care, and institutional interiors. National Trade Center at Exhibition Place. 800/677–6278.

10x10 Presentation
San Francisco
September 30
A diverse international roster of architects, selected from the book *10x10,* present and discuss their recent buildings and projects. Yerba Buena Center for the Arts Theater. 415/978–ARTS.

Richard Morris Hunt Fellowship
France
Through September 30
This fellowship is awarded to French and American architects pursuing careers in historic preservation. In 2001, an American architect will spend six months in France studying preservation practice related to the documentation, protection and enhancement of French heritage, culture, environment, and resources. 202/626–7511.

Inventing Futures—The Seventeenth Encounter of Latin American Students of Architecture
Los Angeles
September 30–October 8
The council of Latin American Students of Architecture United States chapter sponsors the first Pan-American event for architecture students and interns. The lectures will center on the growing Hispanic population in Los Angeles and its implications. www.cleausa.com

CERSAIE 2000
Bologna, Italy
October 3–8
CERSAIE 2000 is the world's largest exhibition of ceramic tile and bathrooms furnishings. International exhibitors will show their newest products, highlighting the technologically and aesthetically expanding tile and furnishings industry. Bologna Fairgrounds. www.cersaie.it. 212/980–1500.

Rail-Volution 2000: The Livable Metropolis, Prospects and Profits
Denver
October 4–8
A definitive national conference on the building of livable communities comprises hands-on workshops, case studies of built examples, and moderated panel discussions. The Adams Mark. 800/788–7077.

Justice Facility Partnerships and Leading-Edge Justice Technology
Charlotte, N.C.
October 5–7
This two-day forum sponsored by the American Institute of Architects (AIA) Committee on Architecture for Justice provides an interactive forum for architects, planners, facility operators, government officials, and private developers to discuss the planning, design, operation, and financing of multiuse justice facilities. The Adam's Mark Hotel. 703/780–7300.

Designing for the 98% without Architects
Princeton, N. J.
October 7–8
The conference consists of three panels presenting the work of community design centers, design/build programs and nonprofit organizations. Panel discussions will be a forum for dialogue between professionals and young designers. 717/337–1447.

Utopia and Reality—Modernity in Sweden 1900–1960
Stockholm
October 7, 2000–January 14, 2001
Exhibition of over 450 works by architects, designers, and artists focusing on how modernity was expressed differently in Sweden from the

Act before the 10/1/00 deadline

Small-business owners...

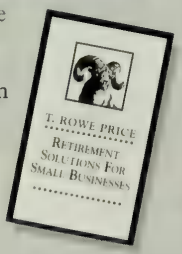
Is the SIMPLE IRA Plan right for you?

T. Rowe Price can help you find out.
If you're a small-business owner and want to start a retirement plan for you and your employees, you should consider this option. The SIMPLE IRA retirement plan is like a 401(k) in that both you and your employees contribute to the plan. The difference is that the SIMPLE IRA is much easier to set up and less expensive to maintain.

Act before the October 1 deadline.
Call T. Rowe Price today. We'll send you our free Retirement Solutions guide, along with our SIMPLE IRA kit. Remember, you only have until October 1 to set up your plan for 2000.

Retirement plans for small-business owners

This free guide will help you compare your retirement plan options. You can choose the one that's best for you and your business.



For your free kit, call our retirement representatives today

1-800-831-1412
www.troweprice.com

Invest With Confidence
T.RowePrice

T. Rowe Price Investment Services, Inc., Distributor. SIMPI055772

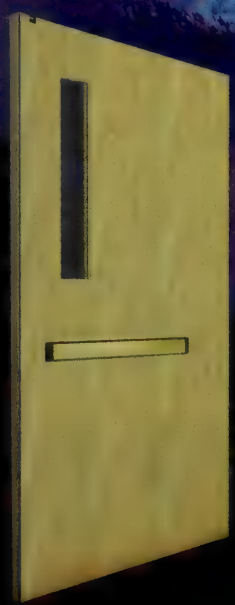
CIRCLE 88 ON INQUIRY CARD

Our Fire Doors Are Starring In An Application Near You



The RITE Door®

Integrated Door Systems



The Rite Door integrates factory assembled hardware and door with a wide range of custom finishes and options.

Contact Adams Rite for more information.

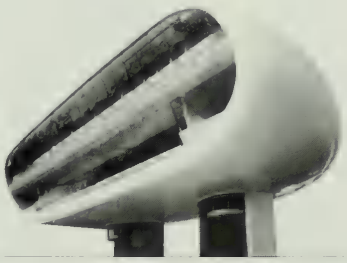
The Rite Door is the one source solution for fire-rated doorways. It combines integrated, pre-installed hardware and innovative design for a beautifully simple fire door that is quick to install and easy to maintain. The Rite Door is soundly constructed with Grade 1 Exit Hardware and meets the strictest building codes and ADA guidelines. For theaters, and lots of other applications, The Rite Door is a stellar performer.

ADAMS RITE
MANUFACTURING CO.

260 Santa Fe Street, Pomona, CA 91767 • 800-872-3267 • Fax: 800-232-7329 • www.adamsrite.com

CIRCLE 89 ON INQUIRY CARD

The NatWest Media Centre, Lord's Cricket Ground, UK
Architect: Future Systems
Photographer: Richard Davies



You don't have to live in the UK to join the RIBA.

The RIBA derives its authority and strength from more than 27,000 architect members worldwide. Join the RIBA as a Corporate member and demonstrate your professional status to clients and co-professionals worldwide. Gain access to the professional recognition, development and information you need to meet the demands of international practice and help the RIBA to secure more influence for excellence in architecture.

Full architect members of the AIA are eligible to join the RIBA. Call +44 20 7307 3650 or email membership@inst.riba.org for more information.

Corporate membership
www.architecture.com

CIRCLE 90 ON INQUIRY CARD

Dates & Events

rest of the world. Modern Museum. +46 8 5195 5210.

In Search of the Simple Whole
Mexico City
October 7-31
An architectural exhibit featuring recent work by Michael P. Johnson. The exhibit includes photo murals of constructed work, drawings of unbuilt projects, computer-generated images and models. Barragan Studio. 505/737–0942.

Preserving the Recent Past II
Philadelphia
October 11–13
Sponsored by the National Park Service, the General Services Administration, the Society of Architectural Historians, DOCOMOMO, and other preservation-minded groups, this weekend of events includes 70 speakers, an exposition, tours, and a curtain-wall symposium. Loews Hotel (historic PSFS Building). 202/343–6001.

Form! Function! Future! Conference
Portland, Ore.
October 14–17
This conference offers professional development for private, corporate, and public architects to offer their services in a new marketplace environment. Features include: successful business practices, good design concepts, computing for design, meeting client's needs, and new sources of revenue. Portland Hilton Hotel. 202/626–7410.

Uniting the Useful with the Beautiful: The Architecture of the Arts and Crafts Movement
Perry, Iowa
October 19–22
This year the focus of the conference is the architecture of the Arts and Crafts movement, along with the designers who created, and are creating, homes and buildings that provide the environment for our lives. Hotel Pattee. 212/889–3580.

Structure and Meaning in Human Settlements
Philadelphia
October 20–21
Conference emphasis will be placed on the common ground between architectural theories about place and dwelling and current research in anthropology about settlements and cultural landscapes. University of Pennsylvania. 215/898–5728.

Nature Constructed/Nature Revealed: Eco-Revelatory Design
Washington D.C.
Through October 22
Exhibition presenting 15 landscape architecture projects. The landscapes are ecologically sound and reveal and interpret ecological phenomena, processes, and relationships through video, sculpture, models, photographs, drawings, and plans. National Building Museum. 202/272–2448.

FEDCON 2001
Washington D.C.
October 23
Federal officials involved in construction will present building budgets, plans, and updates on new regulations and their impact. This program is free and cosponsored by CMD Group and the National Institute of Building Sciences. 800/283–4699.

North American Construction Forecast
Washington D.C.
October 24
This daylong conference sponsored by CMD Group brings together economists and analysts from the United States, Canada, and Mexico to explore conditions that will determine building activity. National Press Club. 770/417–4261.

Aluminum by Design: Jewelry to Jets
Pittsburgh
October 28, 2000–February 11, 2001
The first major museum exhibition to explore how aluminum has inspired creativity and sparked innovation in design, including works by such visionaries as René Lalique, Jean Prouvé, Ludwig Mies van der Rohe, Russell Wright, Charles and Ray Eames, and Gio Ponti. Carnegie Museum of Art. 412/688–8690.

Computers for Construction 2000 and AEC Systems
Anaheim, Calif.
November 6–9
The only tradeshow and conference dedicated exclusively to computer use by contractors, and the regional computer and high-tech event for the design and construction industry join forces. Anaheim Convention Center. 610/458–5472.

"Good Design is Good Business," Design Strategies for the New Economy
Washington, D.C.
November 17
A Business Week/Architectural Record conference

You Don't Have To Be Famous To Create A Masterpiece

16th CENTURY STONE

Project: **St. Peter's Basilica**
Designer: **Michaelangelo**
Product: **Marble & Travertine**

The greatest church of Christendom was begun in 1506 under Pope Julius II. It had 13 chief architects, including Michaelangelo, who held the post until his death in 1564. The top of its cupola rises 435 feet above St. Peter's Square, almost 150 feet taller than the U. S. Capitol.



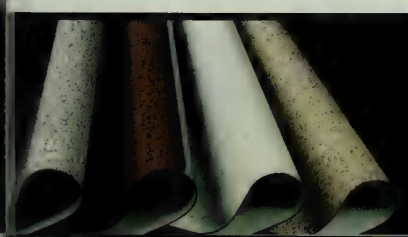


21ST CENTURY STONE

Project: **Capital Commons**
Architect: **Smith, Hinchman & Gryllis Associates, Inc.**
Product: **ALPOLIC® Red Granite**

This seven-story, six-year-old building was reclad with ALPOLIC STONE SERIES,® utilizing a dry gasketed aluminum composite panel system. The entrances were clad with ALPOLIC® red granite stone series aluminum composite material that weighs only one pound per square foot.

Like Michaelangelo's creations in marble, we have taken aluminum composite materials to new heights. In fact, we're the leader in offering new and innovative products that can help you realize your visionary designs. ALPOLIC® was the first to embrace PPG/MEGAFLON,® a high-performance fluorocarbon, as our primary paint finish. We were the first to offer a virtually endless palette of colors limited only by a designer's vision. Now we've broadened our line to offer you such unique products as our ALPOLIC STONE SERIES,® our ALPOLIC A-LOOK® reflective mirror surfaces and our ALPOLIC ISD® interior products that simulate wood and stone finishes. When you have a vision for the 21st Century, create your masterpiece with ALPOLIC products.



ALPOLIC®

Helping You Create Today's Masterpieces

For more information, call 1-800-423-7270
or email us at www.alpolic.com

©2000 Mitsubishi Chemical America, Inc

CIRCLE 91 ON INQUIRY CARD

OFFICIAL COURT NOTICE

TO ALL PERSONS, OR THEIR PROPER ASSIGNEES, WHO OWN BUILDINGS IN THE UNITED STATES ON WHICH PHENOLIC FOAM ROOFING INSULATION ("PFRI") MANUFACTURED BY KOPPERS COMPANY (NOW KNOWN AS BEAZER EAST, INC.) OR JOHNS MANVILLE CORPORATION AND JOHNS MANVILLE INTERNATIONAL IS INSTALLED OVER A METAL ROOF DECK, OR WHO HAVE A PROPERTY INTEREST IN SUCH BUILDINGS WHICH OBLIGATES THEM TO MAINTAIN THE BUILDING'S ROOFING SYSTEM

Notice is hereby given that settlements have been reached in the class action lawsuit entitled Sebago, Inc. et al. v. Beazer East, Inc., et al., Nos. 96-10069-MLW and 96-10656MLW (United States District Court, District of Massachusetts), two settlement classes have been conditionally certified and preliminary approval of the settlements has been granted by the District Court. **The settlements will provide compensation to persons who own, or are obligated to maintain the roofing system, of buildings with Phenolic Foam Roof Insulation ("PFRI"). Koppers Co. n/k/a Beazer East, Inc. manufactured PFRI from 1980 through January 17, 1989 under the names Koppers Exeltherm Xtra and Rx, Genstar, Pittsburgh-Corning or Loadmaster ("Beazer PFRI"). Johns Manville and Schuller International manufactured and sold PFRI from January 18, 1989 through December 31, 1992 under the names "Ultragard Premier," "InsulBase Premier," and "Fesco-Foam Board" ("JM PFRI").** The settlements will be considered for approval at a Fairness Hearing scheduled by the Court for December 13, 2000.

You may be a member of one of the settlement classes if you own, or are obligated to maintain the roofing system, of a building or other structure in the United States or its territories and possessions in which Beazer PFRI or JM PFRI is currently installed within a roofing system and above a metal roof deck as of June 30, 2000, the date of the court's order preliminarily approving the settlements. The following persons are not included in the settlement classes: (a) persons who properly execute and timely file a request for exclusion from the settlement classes in accordance with the terms of the Settlement Agreements, and (b) persons whose roof decks are entirely non-metal; and (c) persons whose roof deck was fully remediated or whose claims relating to Beazer PFRI or JM PFRI were previously settled by Beazer or Johns Manville. Under the settlements, persons whose membrane system is entirely comprised of a metal roof system are not included in the settlement class.

This Notice Is Only A Summary. There are more detailed written settlement notices which explain the terms of each settlement and your right to participate, object or exclude yourself from the settlement classes.

If you think you may be a member of one of the settlement classes and you did not receive a written settlement notice by mail, you should request a copy of the appropriate notice by contacting the Notice Administrator by mail or telephone as follows:

Phenolic Foam Roof Insulation Litigation
c/o Standish Legal Processing
Stonehill Corporate Center
999 Broadway, Suite 500
Saugus, MA 01906

1-877-917-PFRI

www.pfriclaims.com

The written settlement notices include Claim Forms, Requests for Exclusion and Instructions on how to opt-out of the settlements and other information.

If you are a member of the Settlement Classes and do not opt out of the Settlements by November 22, 2000, you will be entitled to participate in the Settlement Claims Program and will be bound by the Court's Judgments in this Action.

PLEASE DO NOT CONTACT THE COURT

CIRCLE 92 ON INQUIRY CARD

Dates & Events

in association with the National Building Museum and the AIA. This half-day conference brings together key business leaders and architects to discuss collaboration between achitects and clients resulting in the achievement of business goals. Attendees can attend exclusive preview reception for *On the Job: Design and the American Office*. National Building Museum. To register go to www.architecturalrecord.com.

On the Job: Design and the American Office
Washington, D.C.
November 18–June 2001
Exploring the office as architectural and social space, this major exhibition documents the American office as a dynamic environment whose significance extends beyond physical boundaries. National Building Museum. Registration required. Call 202/272–2448 or visit www.nbm.org

Competitions

Ar+d Award
Deadline for receipt of entries: September 12
This award for completed work by architects under the age of 45 aims to recognize new talent worldwide. Submissions are encouraged for all building types, interiors, manufactured products, urban design, landscape, bridges, and temporary structures. First prize is £5,000. Go to www.arplus.com for more.

Competition Notice for the Museum of the 20th Century in the Arengario
Deadline for first stage plans: October 16
The aim of this juried competition is to restore and preserve the building known as the Arengario, in Piazza del Duomo, as well as to set up inside it a new Museum of the 20th Century. The first stage of the competition involves anonymous presentations which will be selected without creating a merit classification list. Five proposals will be chosen for the second stage. www.milanoprogetti.org or Raffaella Poletti at +02/89013883.

Before + After: The Intentions and Processes of Transformation
Deadline for receipt of entries: October 16
A juried exhibition will present a critical inquiry into architectural interventions and the trends affecting change in the built environment. Two images and supporting process documentation will compare the state of an original condition and the effect of a practical and transformative intervention. $15 entry fee. 303/443–1945.

2001 Chicago Neighborhood Development Awards
Deadline for receipt of entries: October 25
Created in 1995 by Local Initiatives Support Corporation/Chicago and #8211, a community development support organization, this awards program offers several awards for community-oriented non-profit and for-profit architectural and development projects. To receive an application contact Garry Huebner or Jeanette Figueroa at 312/360–0400.

Architecture, Image, and Emotion
Deadline for receipt of entries: October 30 6:00 P.M. Italian time
The competition is designed to elicit ideas for a retail facility to be built on different scales. Open to all architects and engineers registered with their respective professional associations or possessing the appropriate qualifications in their home country, entries may be submitted as a team. www.arcadata.it.

Please submit information for the Dates and Events section to ingrid_whitehead@mcgraw-hill.com. Submissions should be sent two months before the event occurs.

Weyerhaeuser Architectural Doors

Multimedia Catalog

Put the Wizard to Work for You!



Need door information for your project fast? Order *Weyerhaeuser's new CD-ROM.* Step into Weyerhaeuser's new virtual showroom and experience 3-D full-color surround! Scroll around the room and discover all the tools you need. Apply SelectorWizard™ to write your specifications, estimate door price ranges and lay out door drawing elevations. All in one easy-to-use CD-ROM!



PriceWizard
Specify a door and make selections for size, moldings, louvers, lites and veneers. Select a veneer and the relative door cost appears. Even at an early design stage, PriceWizard will help you find the correct value door for your application.

ElevationWizard
Prepare conceptual layouts. Display elevation options. Augment contract drawings. Make your work easier with help from the Wizard!

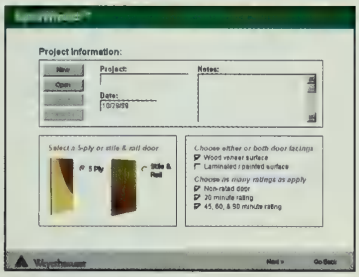
Make your work infinitely easier. Put the power of the Wizard — and Weyerhaeuser Doors — to work for you!

Order your new Weyerhaeuser 3-D CD-ROM, the most advanced architectural door product catalog on the market. **Call 1.800.869.3667 ext 2200 today.**

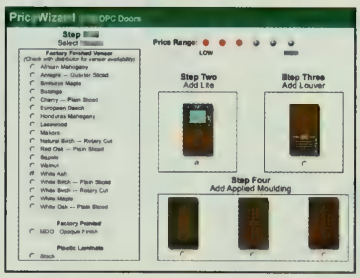
SpecWizard
The best spec writing tool available. You define door type, rating, accessories and finishes. Then SpecWizard translates your selections into a CSI specification – enhancing accuracy and saving you hours of spec writing!



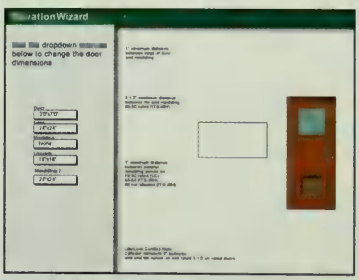
Enter the 3-D CD-ROM Surround Showroom.



Write specifications easier with SpecWizard.



Estimate door prices easier with PriceWizard.



Lay out door drawings easier with ElevationWizard.

WEYERHAEUSER
Architectural Doors
http://doors.weyerhaeuser.com
e-mail:doors@weyerhaeuser.com
1.800.869.DOOR ext 2200

CIRCLE 93 ON INQUIRY CARD

The SelectorWizard™ icon is a trademark of VISCOMM, Inc. and is used with permission.

SOLID DOORS. SOLID PROMISES.™

Weyerhaeuser

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

ANSWERS

Questions appear on page 162. To receive CES credits, fill in the education reporting form below or on our Web site (www.architecturalrecord.com).

1. Fabrics offer two main advantages: translucency and a good strength-to-weight ratio. They are very strong for their light weight, which enables them to cover large areas with little material. For these reasons, they are easy to install and require little energy in the building process. Because they are lightweight, fabrics interact well with the elements and give people a feeling of connection to the outdoor surroundings. The translucency of fabrics allows natural lighting inside, which often eliminates the need for artificial lighting. Fabrics are available in a wide range of colors, weights, and widths to fit designs.

2. Even though fabrics are engineered to meet the same codes and standards as other building materials, most architects in the U.S. are not familiar with their benefits. Fabrics are widely used in countries outside the U.S. as awnings and canopies to limit heat gain, because air conditioning in these regions is not always common. They are also used as roofs to introduce natural light while providing shade.

3. Fabrics can be used for roofing, where they reflect heat and allow natural lighting; cladding, where they are a lightweight material; shading, where they reduce heat gain; or as the entire shell of a building. They are ideal for covering large areas where light demands are high, such as concert halls, shopping malls, convention centers, or airport terminals.

4. Cotton canvas was the old standard fabric for canopies, but it is seldom used today because of problems with rot and mildew. Synthetic fabrics are now the choice, usually made from polyester, fiberglass, polyethylene, modacrylic, or fibers. Coatings of Teflon, PVC, or Tedlar are applied to the fabric to help prevent ultraviolet degradation and add strength as well as water- and dirt-resistance. Polyester fabric has the flexibility to be packed and unpacked, while fiberglass fabric does not. Polyethylene is a newer fabric and it is 100 percent recyclable. Layering or lining is used with fabrics to improve performance, such as R-values.

5. Structural fabrics can be supported in three ways. Masts are used to give fabric roofs the iconic peaks; they are steel or aluminum and span short distances. Arches allow larger spans but require more structural engineering. External trusses allow for a wide-open space but require costly engineering and materials.

AIA/CES EDUCATION REPORTING FORM

(Use to report learning unit hours earned for ARCHITECTURAL RECORD only.)

Member information:

Last Name **First Name** **Middle Initial or Name**

AIA ID Number

Program/project title: Architectural Record (09.00)

☐ "Designing with Structural Fabrics" [page 155]

Completion date (M/D/Y): _____ / _____ / _____

AIA/CES Credit: Each article or sponsored section will earn you one AIA/CES LU hour of health, safety, and welfare credit.
Fill in: ____ total LU hours.

Material resources used:
Journal article or sponsored section: This article or sponsored section addresses issues concerning the health, safety, or welfare of the public.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

Send completed form to University of Oklahoma, Continuing Education, AIA/CES, Room B-4, 1700 Asp Avenue, Norman, OK 73072-6400; fax 405/325-6965. To respond by E-mail, visit www.architecturalrecord.com and click on Continuing Education. For more information, call 800/605-8229.

Timely Offers A New Edge Of Opportunity.

Steel Door Frames That Match Clear Anodized Aluminum.



Timely TA-28 Aluminum Casing
A full width aluminum casing without a reveal in prefinished ALUMATONE™ or clear anodized.



Timely TA-23 Aluminum Casing
Clean, crisp lines of aluminum with a 1/4" reveal in prefinished ALUMATONE™ or clear anodized.



Alumatone™, the latest addition to Timely's extensive selection of finishes, provides the look of clear anodized aluminum in a steel door frame. Now, you can coordinate clear anodized aluminum exterior windows with color matching prefinished steel door frames from Timely. Timely's prefinished steel frames will meet your code requirements including full **90-minute fire ratings.**

New Alumatone™, like all Timely finishes, is a baked-on polyester base paint, applied in coil form to assure superior durability, performance and appearance. Five casing design options are available including 2 aluminum profiles offering the crisp lines of aluminum.

Timely is recognized as the originator of the prefinished drywall frame concept. For over 30 years, we've provided steel frames that feature full perimeter anchoring for extra strength and a snap-lock casing system plus matching borrowed lites and sidelites. Contact us now to learn more about the new Alumatone™ finish and the Timely prefinished steel door frame system.

TIMELY
PREFINISHED STEEL DOOR FRAMES
A DIVISION OF S.D.S. INDUSTRIES, INC.
CIRCLE 94 ON INQUIRY CARD
10241 NORRIS AVE. ▪ PACOIMA, CALIFORNIA 91331-2292
(818) 896-3094 ▪ (800) 247-6242 ▪ FAX (818) 899-2677
9782 INTEROCEAN DRIVE, CINCINNATI, OHIO 45246
(513) 682-9600 ▪ (800) 346-4395 • FAX (513) 682-4102

Visit us on the internet at http://www.TimelyFrames.com

SEE US AT JLC LIVE, BOOTH NO. 638

© 2000 Timely

DUGGAL *continued from page 126*

and poetic, Dubbeldam tried, she says, "to let the architecture illuminate itself," emitting or modulating rays wherever possible without light fixtures per se. When she learned, well into the project, that the new photo-enlargers would not fit the eight-foot height allowance beneath the mezzanine, the architect ingeniously altered her six yellow boxlike darkrooms. Extending their forms vertically, she created "enlarger chimneys" that poke through to the upper level—and topped them with lightboxes that get constant use. "We were pleased with the reversal: the inversion of light and dark," says the architect. On the darkrooms' entry side, the rhythm of red warning lights punctuates the six discrete volumes, while on the opposite side, the reveals between them glow with recessed fluorescent lamps. These ethereal stripes of light, in turn, echo the parallel procession of cast-iron columns.

ARCHI-TECTONICS TRIED, SAYS DUBBELDAM, TO "LET THE ARCHITECTURE ILLUMINATE ITSELF."



Reflected in glass partitions, the mezzanine-level lightboxes seem to float.

Accentuating the effect are reflections in the abundant glazing and the main level's ultra-shiny, pale-gray epoxy floor. With such self-leveling epoxy, Dubbeldam points out, "the higher the gloss, the greater the strength and chemical resistance." Reflections also bounce from recessed aluminum baseboards that visually cut each volume free of the floor—giving even the opaque darkroom boxes a gravity-defying lightness.

In the end, the project's many practical features—the clean-lined forms, the well-placed lightboxes, the openness beneath the balcony, and the varied levels of illumination—have an intrinsic quality that tends to dematerialize into light and floating reflections, perhaps not coincidentally, evoking the virtual realm. ■

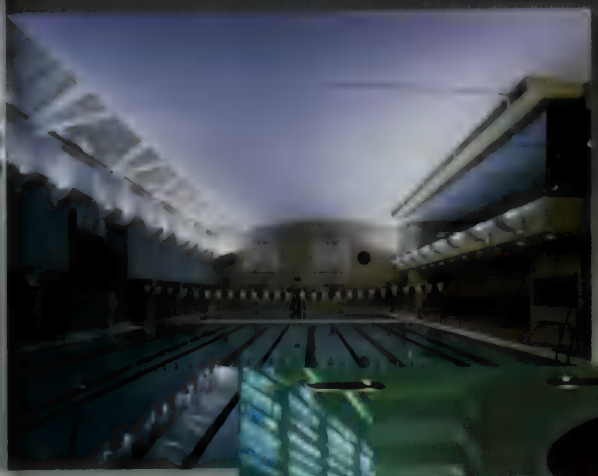


CIRCLE 95 ON INQUIRY CARD



CIRCLE 96 ON INQUIRY CARD

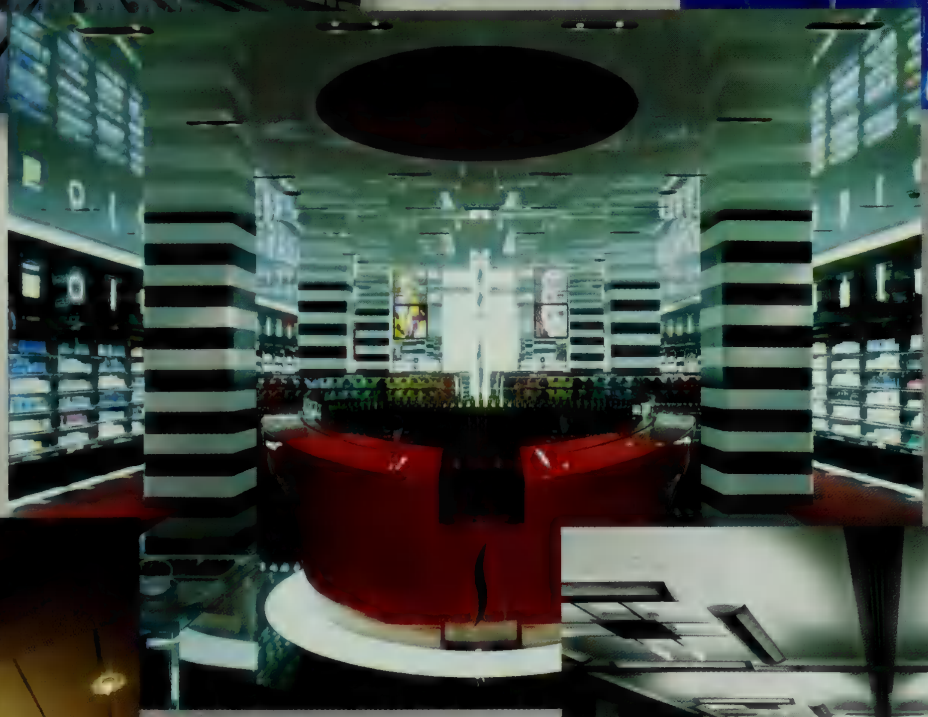
Ceiling technology at its best.



New York University
Natatorium
New York, NY



The Woodlands Inn
Evolution Lounge
Wilkes-Barre, PA



Sephora
Cosmetics Boutique
New York, NY

Troster Singer
Trading Floor
Jersey City, NJ



The Union League
Lincoln Hall
Philadelphia, PA



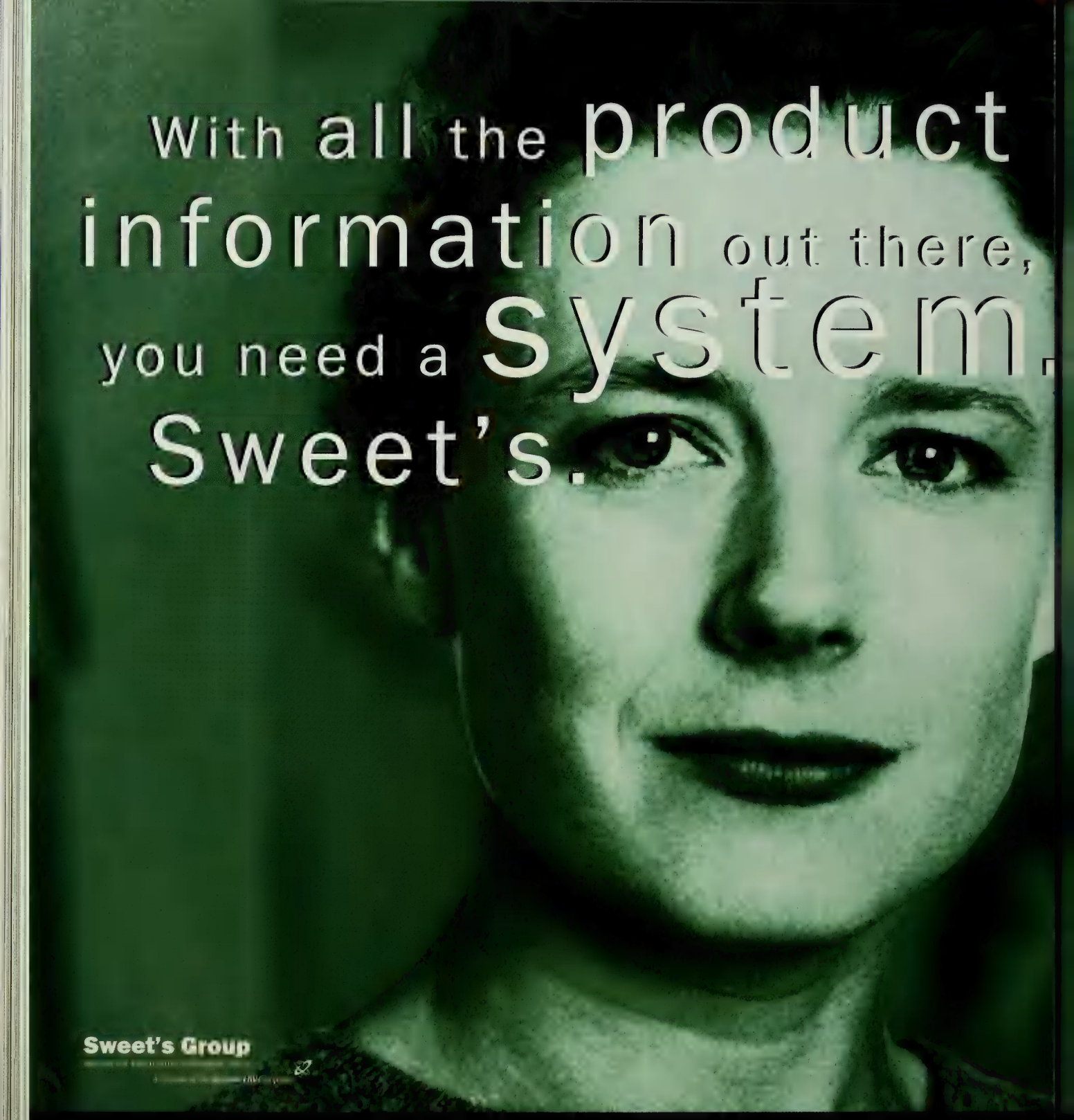
newmat

STRETCH CEILING SYSTEMS

NEWMAT USA LTD.
newmat1@optonline.com

Tel: 631.261.1498
Fax: 631.261.1756

CIRCLE 97 ON INQUIRY CARD



Reserve the most comprehensive product selection and specification resource in the AEC industry, Sweet's System—2001 Edition—at special pre-release savings. Call 1 800 442-2258 or visit www.sweets.com now.

The fully-integrated, multi-media *Sweet's System—2001 Edition.*

Find the right product for your project, conveniently and quickly with *Sweet's System—2001 Edition.*

Sweet's is far and away today's leading resource for AEC professionals. In fact, ***97% of all architects use Sweet's as their primary product information source.**** Sweet's provides detailed information, specifications and technical data on more than 25,000 building products from over 1,600 manufacturers.

Sweet's System is more than just the comprehensive bound catalog files. It's a battery of integrated multi-media components, in print, digital and electronic forms, all designed to work as a system to meet the many needs of your design team.

Nothing makes it easier to search, select and specify building products.

Reserve Sweet's now and you'll get the 2001 Edition at a special pre-release discount. Plus you'll also begin receiving the current 2000 editions of *Sweet's CD* and *Sweet's Product News.* **Call 1 800 442-2258** or visit **www.sweets.com** now to secure your *Sweet's System—2001 Edition. (Please refer to 5SAR1 when you call.)*

When you need product information, the *Sweet's System* is all you need.

**Independent Market Survey: Hase/Schannen 1999.*

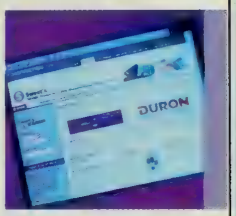
CIRCLE 98 ON INQUIRY CARD



Sweet's Catalog Files



Sweet's CD



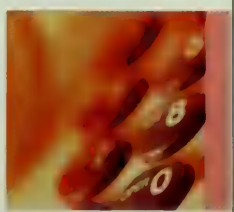
sweets.com



Sweet's Directory



Sweet's Product News



Sweet's BuyLine® Service

Sweet's
Construction's Product Marketplace

ADVERTISERS INDEX

Bold: *indicates page number.*
Italic: indicates Reader Service Number.

PAGE NUMBER	READER SERVICE NUMBER	
206	*74*	A/D Fire Protection Systems Inc
221	*89*	Adams Rite Manufacturing Co
233	*99*	AECdirect
245		AIA (BUILDING BIG™)
241		AIA Conference
234		AIA Online
198	*70*	Altro Floors
245		Architectural Record Interviews
48		Architecturalrecord.com
2cov-1	*1*	Armstrong
40		Autodesk (Online Conference)
16		Autodesk (iDesign)
46		Autodesk (piracy)
179	*59*	Autodessys
56	*30*	Avonite
170	*55*	Bentley Systems Inc
174	*57*	Bidcom Inc
154	*48*	Birdair
191	*64*	Bricsnet US
181	*60*	Buzzsaw.com
62	*32*	C/S Group
26-27	*14*	Caradco
157	*49*	Ceco Door Products
228	*95*	Charles Loomis
64-65	*33*	Copper Development Association
24	*12*	CSI/Construction Specifications Inst
168-169		Dell
228	*96*	Doug Mockett & Company Inc
8-9	*5*	Dow Chemical Company
20-21	*10*	DuPont (Antron®)
23	*11*	DuPont (Antron Lumena®)
10-11	*6*	DuPont (Corian®)
219	*87*	DuPont (Fire Extinguishants)
92-93	*43*	DuPont (Zodiaq™)
58	*108*	Eagle Windows & Doors
235	*107*	e-Builder
33	*17*	EFCO Corporation
165	*53*	Follansbee Steel
77		Forms + Surfaces
247	*104*	FW Dodge, Div of The McGraw-Hill Cos
217	*85*	Gary Price Studios
14-15	*8*	Georgia-Pacific
209	*78*	Georgia-Pacific
80-81	*39*	Glen Raven Mills Inc
104		Good Design is Good Business Conf
44	*24*	Gordon Inc
212	*81*	GR Plume Company
188	*63*	Graphisoft
2	*2*	Hanover Architectural Products
50	*27*	Hansgrohe Inc
72	*36*	Homasote
35	*18*	Imagine Tile
153	*47*	Invision Carpet Systems
37	*19*	IWP
47	*25*	Johns Manville
73	*109*	Julius Blum & Co Inc
45	*106*	Kim Lighting
202	*72*	Kolbe & Kolbe Millwork Co Inc
4cov	*100*	Kroin Incorporated
211	*110*	Laticrete International Inc
28	*15*	Litecontrol
41	*21*	Madera Tile
208	*77*	Marble Institute of America Inc, The
6-7	*4*	Marlite
78-79	*38*	Marvin Windows & Doors
60-61	*31*	MechoShade Systems Inc
197B	*69*	Mee Industries Inc
187	*62*	Meridian Project Systems Inc
218	*86*	Metpar Corp
3cov	*105*	Miele
223	*91*	Mitsubishi Chemical America Inc
105	*45*	MM Systems Corporation
208	*76*	Mortar Net
210	*80*	Musson Rubber Co
74	*37*	National Gypsum Company
182	*61*	Nemetschek North America
229	*97*	Newmat USA Ltd
197A	*68*	Northwest Energy Efficiency Alliance
106	*46*	Odegard
196	*67*	Outlook 2001
70	*35*	Parex Inc
18-19	*9*	PCI/Precast/Prestressed Concrete Inst
201	*71*	Petersen Aluminum
224	*92*	Poorman-Douglas
31	*16*	PPG/Pittsburgh Paints
53	*28*	RedVector.com
214	*83*	Research Engineers
4-5	*3*	Revit Technology Corporation
204-205	*73*	Ricoh
90	*42*	Roppe Corporation
222	*90*	Royal Institute of British Architects
166	*54*	Schott Corporation
88	*41*	Sherwin-Williams
25	*13*	Sloan Valve Company
210	*79*	SMI/Spider Manufacturing Inc
38-39	*20*	Solutia
192	*65*	Sony Electronics Inc
96	*40*	Spacecraft
42	*22*	Speakman
215	*84*	Specialty Steel Industry of NA
102-103	*44*	StarNet
213	*82*	Sto Corp
230-231	*98*	Sweet's, Div of The McGraw-Hill Cos
246	*103*	Sweet's, Div of The McGraw-Hill Cos
220	*88*	T Rowe Price
227	*94*	Timely
172	*56*	Trade Commission of Spain
49	*26*	Trimco/BBW
164	*52*	Truebro
177	*58*	USG Corporation
207	*75*	Viking Range Corporation
161	*50*	Visa Lighting Corp
66	*34*	Vistawall Architectural Products
245	*102*	Voli
43	*23*	Wayne-Dalton Corporation
12-13	*7*	Weather Shield Windows & Doors
225	*93*	Weyerhaeuser
163	*51*	Wilsonart International
195	*66*	Wind2 Software
55	*29*	Wiremold

For additional information on these advertisers, circle corresponding number on Reader Service Card, or visit our web site at ***www.architecturalrecord.com*** *and click on Advertiser Information.*

Executive Offices

The McGraw-Hill Companies
Two Penn Plaza
New York, NY 10121-2298

VICE PRESIDENT / PUBLISHER
Elaine Shusterman
(212) 904-3475 Fax: (212) 904-4652
shusterman@mcgraw-hill.com
Assistant: Monika Macezinskas

ADVERTISING DIRECTOR
David Johnson
(212) 904-6217 Fax: (212) 904-4652
dave_johnson@mcgraw-hill.com
Assistant: Joan Notaris

PRODUCTION MANAGER
Stephen R. Weiss
(212) 904-2793 Fax: (212) 904-6800
stephen_weiss@mcgraw-hill.com

PROMOTION DIRECTOR
Deborah Smikle-Davis
(212) 904-4558 Fax: (212) 904-6774
deborah_smikle-davis@mcgraw-hill.com

Advertising Sales

NORTHEAST / MID-ATLANTIC
Two Penn Plaza
New York, NY 10121-2298
Ted Rzempoluch
(212) 904-3603 Fax: (212) 904-4256
rzempoluch@mcgraw-hill.com

MIDWEST
One Prudential Plaza
130 East Randolph Street, Suite 400
Chicago, IL 60601-6213
Mike Gilbert (IL, IA, MN, MO, OH, W.PA, WV)
(312) 616-3338 Fax: (312) 616-3276
mike_gilbert@mcgraw-hill.com
David Johnson (IL, IN, KS, MI, ND, NE, OK, SD, TX, WI)
(312) 616-3339 Fax: (312) 616-3276
dave_johnson@mcgraw-hill.com

SOUTHEAST / MID-ATLANTIC
4170 Ashford-Dunwoody Rd.
Atlanta, GA 30319
Susan Shepherd
(404) 843-4770 Fax: (404) 252-4056
sshepherd@mcgraw-hill.com

WEST (AZ, CA, CO, NM, NV)
Media Sales Associates
1750 Nantucket Circle, #134
Santa Clara, CA 95054
Bill Hague
(408) 492-9292 Fax: (408) 492-9797
(800) 830-4351 Fax: (253) 858-7576
billh@abptuf.org

WEST (BRIT. COLUMBIA, ID, OR, S. CA, UT, WA)
5901 S.W. Macadam Avenue, Suite 230
Portland, OR 97201
Bill Madden
(503) 224-3799 Fax: (503) 224-3899
billmad@msn.com

CANADA (EXCEPT BRITISH COLUMBIA)
48 Little Rebel Road, RR 3
Schomberg, Ontario L0G 1T0
Frank A. Spangenberg
(905) 939-0653 Fax: (905) 939-0654
spang@sympatico.ca

Manufacturers' Spotlight/Postcard Service

Ally Wingate
(800) 484-4042 ext 3042 Fax: (770) 889-9152
ally_wingate@mcgraw-hill.com

Classified Advertising

Ally Wingate
(800) 484-4042 ext 3042 Fax: (770) 889-9152
ally_wingate@mcgraw-hill.com

Editorial

(212) 904-2594 Fax: (212) 904-4256
www.architecturalrecord.com

Subscriber Service

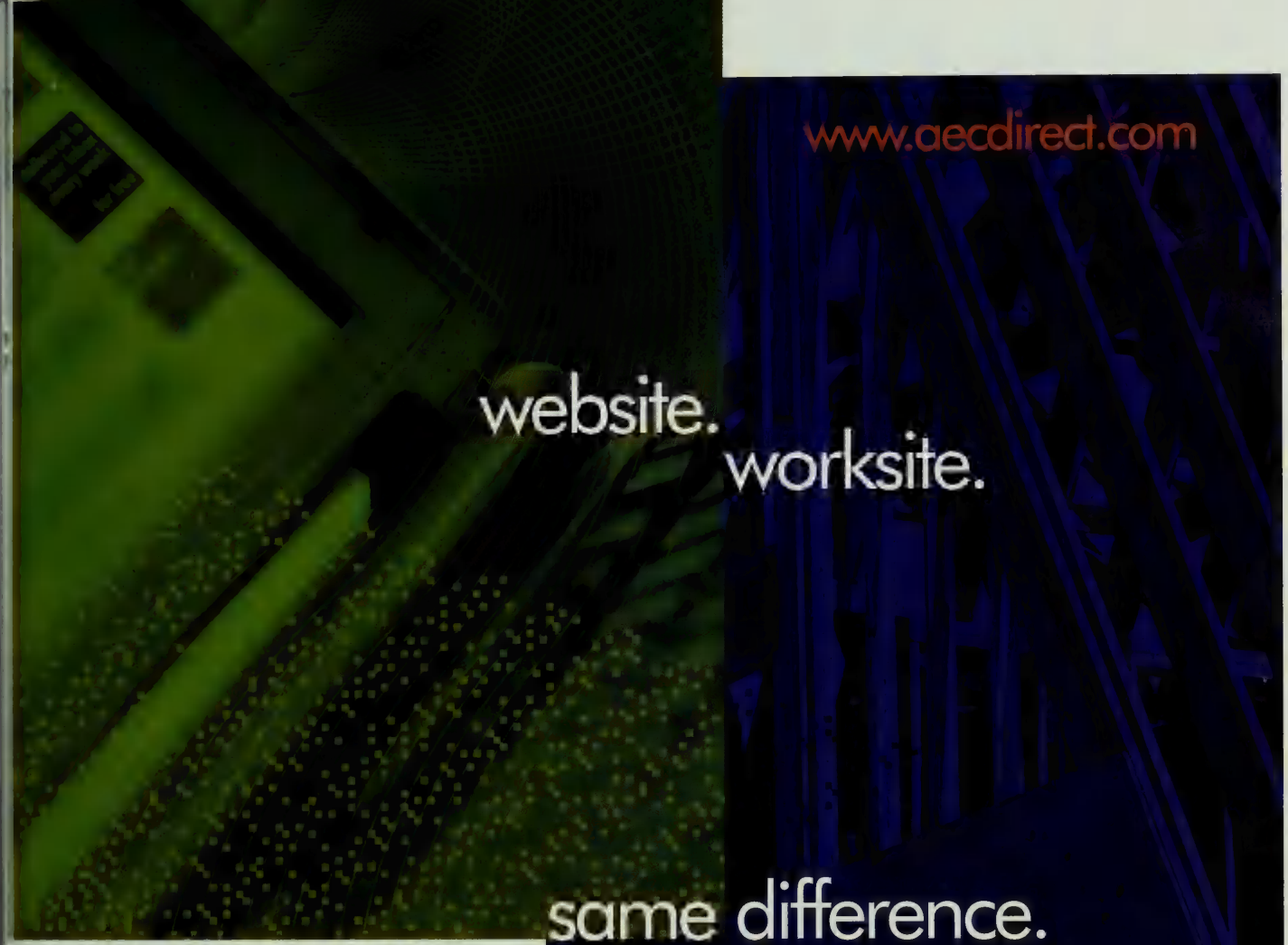
(888) 867-6395 (USA only)
(609) 426-7046 Fax: (609) 426-7087
p64cs@mcgraw-hill.com

Back Issues

(212) 904-4635
phyllis_moody@mcgraw-hill.com

Reprints

(609) 426-5129 Fax: (609) 426-5472
doreen_bitowf@pubs.mcgraw-hill.com



www.aecdirect.com

website.
worksite.

same difference.

AECdirect links your worksite with the Internet, empowering you to spend more time designing and building. Match specification information from MASTERSPEC® to corresponding product data on Architects' First Source and Sweet's, a service only available on AECdirect. Grow your business with valuable development tools from leading sources, access the only Web source for AIA contract documents, and continue your professional development with online AEC seminars.

AECdirect
Designed to Build Results.

Get the job done faster, make your clients happier, earn profits more quickly, and make your life easier at AECdirect. With a simple mouse click, you can leverage technology to your advantage.

IBM an e-business solution

AECDirect is an IBM e-Business. The IBM logo, e-business logo and e-business Mark are trademarks of IBM Corporation in the U.S. and other countries. For IBM Mark meaning and disclaimers, visit www.ibm.com/e-business/casestudies.

CIRCLE 99 ON INQUIRY CARD

Founding Partners: AIA BENTLEY CMDGROUP PIX The McGraw-Hill Companies Hanley-Wood, LLC


AIA Convention & Expo
News
Reference
PIAs
The
www.aiaonline.com
Web
for
Architects
Conferences
Free Project Leads
Product Informatio
Classifieds
Continuing Ed
Employment
Check it out–Today!
AIA ONLINE™
NETWORK
e-Architect • AIA/Ri ll Bookstore • Architects Ch nnel • AIA Convention & Expo • Pl ypoint Products
Audited by BPA International.
THE AMERICAN INSTITUTE OF ARCHITECTS

You're one click away from constructing the future.



e-Builder™

2424 North Federal Highway • Suite 316 • Boca Raton, Florida 33431 • www.e-Builder.net

1-800-580-9322

CIRCLE 107 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Three-Sided Fireplace for Unlimited Installations



Heat-N-Glo introduces model PIER-TRC, a three-sided direct vent fireplace that can be terminated vertically or horizontally to accommodate nearly any application. The PIER-TRC is perfect as a room divider, bar, end of counter or a wide variety of creative installation possibilities. As with all Heat-N-Glo fireplaces, the PIER-TRC can be operated by remote control for the ultimate in convenience. Call 888-427-3973.

Heat-N-Glo

CIRCLE 150 ON INQUIRY CARD

Alpha Collection 2000 Aluminum-Stainless Steel

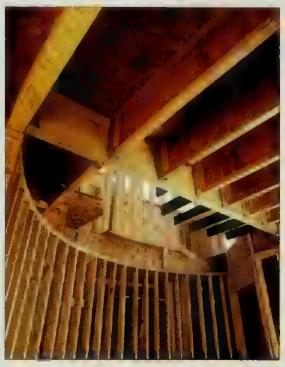


New and innovative design patterns and textures. Ideal for most vertical surfaces. Border to border standard sizes. Thickness from 0.025" to 0.064". Quantity discounts and free design consulting. Ask us about our custom capability. SD+T Marketing INC., Phone: 305-856-3825 TollFree: 877-626-2595 Fax: 305-856-1287 Email: sales@sdtmarketing.com Web: www.sdtmarketing.com

SD+T Marketing Inc.

CIRCLE 151 ON INQUIRY CARD

Willamette E-Z Frame® System



Architects specify the E-Z Frame® System because it offers superior design flexibility. This high-quality engineered wood framing package comes with a lifetime guarantee & is available at competitive prices. The system includes StrucLam® LVL, StrucJoist® I-joists, Willamette Classic Glulams™ & E-Z Rim® Board. Call for information and we'll send you our FREE E-Z Frame System Specifications Binder. 800-887-0748, Ext. 410.

Willamette Industries, Inc.

CIRCLE 152 ON INQUIRY CARD

Luxalon Open Cell Ceiling Systems



Luxalon® Metal Cell Ceiling Systems provide design flexibility which accommodate angles, curves and changes in ceiling height. The cell's open design gives the feeling of a much higher ceiling. Available in the largest selection of patterns, configurations, and finishes found anywhere, these cell ceiling systems effectively mask the plenum, while allowing easy integration of lighting, sprinklers, and HVAC. 800-366-4327 / visit www.hunterdouglasceilings.com

Hunter Douglas

CIRCLE 153 ON INQUIRY CARD

ADA Insulation Safety Covers



Plumberex Specialty Products, Inc. is the only company that manufactures a complete line of ADA safety covers for commercial & residential applications, meeting all building & fire codes with a -0- smoke rating. The Handy-Shield™ Safety Cover is the one and only ADA safety cover on the market with a "Dual" fastening system to help deter theft! For more information call 800-475-8629, Website: www.plumberex.com or email: plumberex@earthlink.net

Plumberex Products, Inc.

CIRCLE 154 ON INQUIRY CARD

Carriage House Shangle™

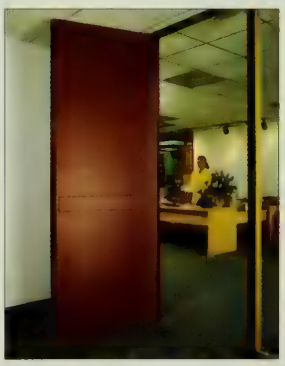


Utilizes CertainTeed's exclusive Super Shangle® construction with two full-size base shingles, resulting in virtually four layers of shingle protection and 8-inch exposure when applied. This super-heavy-weight fiber glass shingle (355 lb. per square) also features a unique chamfered cut for scalloped appearance. UL Class A; lifetime limited, transferable warranty; algae-resistant UL Certified to meet ASTM D 3462.

CertainTeed

CIRCLE 155 ON INQUIRY CARD

Applications



The new flush exit device is designed for use on TOTAL DOORS in single, pairs & double egress pairs. Ideal for corridor & elevator lobby applications in all commercial facilities. The exit device allows continuous, uninterrupted sight-lines in corridors when doors are pocketed in the open position. Its quiet operation is ideal anywhere noisy hardware is a problem. TOTAL DOORS can be retrofitted into existing door frames, saving time & expense.

Openings

CIRCLE 156 ON INQUIRY CARD

The Opening Glass Wall



A full line of aluminum & wood framed systems that make large exterior openings possible. Expand space with indoor/outdoor areas. Increase business with large, inviting entrances. Ideal for residential and commercial applications. An aesthetic, engineered solution offering weather tightness, security, & ease of operation can be provided for almost any conceivable application. Available are folding, paired & individual panel systems. Call 800-873-5673 or fax 415-383-0312. nanawallsystems.com

Nana Wall Systems, Inc.

CIRCLE 157 ON INQUIRY CARD

T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Slate Roofing



Natural North Country slate. For enduring character, nothing else compares. No wonder—it's perfected by nature! Free product brochure showcases the wide variety of sizes and colors, and comes with our Architect's Guide to working with this remarkable roofing material.

North Country Slate

CIRCLE 158 ON INQUIRY CARD

Decorative, Thin-Film Intumescent Fireproofing



Improved spray characteristics & ratings up to 3 hours! A/D FIREFILM®II permits designers to use the appearance of exposed steel with the steel protected from fire. The product is applied as a thin-film coating 0.4 to 3.3 mm (16 to 130 mils) thick. When exposed to fire it expands to form a meringue-like insulating layer up to 4 in. thick. A/D COLORCOAT topcoat is available in a wide range of colors. Call 800-263-4087 or 416-263-4087. Internet: www.adfire.com. See us in Sweet's.

A/D Fire Protection

CIRCLE 159 ON INQUIRY CARD

Save on Sports Flooring



Visit the new Tuflex Rubber Flooring website at www.tuflex.com to see the complete line of rugged, 3/8" thick sports flooring including Spartus, Titan, feature strips for borders and accents, customized logos, reducer strips for wheel chair accessibility and the new 4' x 6' ColorMat. Architectural specifications, installation and maintenance information, a company profile and Tuflex flooring's place in history as an early recycled product are included. Call 800-543-0390.

Tuflex Rubber Flooring

CIRCLE 160 ON INQUIRY CARD



The No. 2006 is a Bauhaus handle based on a Walter Gropius design. Nanz manufactures this and a wide range of other levers, knobs, locks, hinges and cabinetry hardware. Fax a request for our free Product Selection Guide or our $20 catalogue featuring this and over seventy other handles. Phone 212-367-7000, fax 212-367-7375. www.nanz.com

Nanz Custom Hardware Inc.

CIRCLE 161 ON INQUIRY CARD

Dodge-Regupol Launches ECOsurfaces™



Dodge-Regupol (DRI), the world's largest converter of post-consumer tire rubber, launches ECOsurfaces™, xtreme recycled rubber™ flooring for both indoor & outdoor commercial applications. Not only environmentally sound, but also available in 38 vibrant colors, ECOsurfaces in rolls & tiles responds directly to designers' needs & their budget concerns. For a fresh new colorful way to create attractive environments, call Gerbert Ltd. at 877-ECO-surfaces (877-326-7873).

Gerbert Ltd.

CIRCLE 162 ON INQUIRY CARD

Concrete Waterproofing by Crystallization



Applied as a slurry coating Xypex is a chemical treatment that waterproofs by penetrating the concrete with a crystalline formation that "plugs" the pores of the structure preventing water seepage. Xypex is ideal for use on the "inside" of wet underground structures.

Xypex Chemical Co.

CIRCLE 163 ON INQUIRY CARD

Ornamental Picket Fence with a Purpose

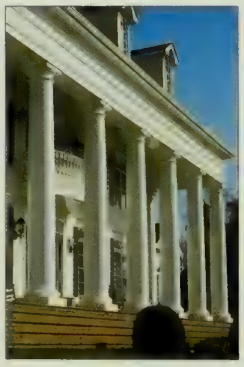


We have given special attention to each & every component of our fence. Every item is designed for strength, durability and low maintenance. No other company builds a complete fence — rail, rivets, brackets, pickets and posts, that is stronger, more durable, have more security or lower maintenance costs than our fences. Monumental Iron Works, 6500 Eastern Ave., Baltimore, MD 21224. Tel: 410-633-6500, Fax: 800-239-2963.

Monumental Iron Works

CIRCLE 164 ON INQUIRY CARD

Melton Classics



Melton Classics architecturally correct columns, balustrades, and architectural details, are the industry standard for quality, yet are affordably priced. Columns are available in fiberglass, resin composite, and wood. MarbleTex™ Balustrades and Columns are integrally colored and require no painting. Ask us about our complete line of architectural elements in MeltonStone™ cast stone. 800-963-3060, web site www.meltonclassics.com

Melton Classics

CIRCLE 165 ON INQUIRY CARD

Shoji – Custom Dividers, Passage and Pocket Doors



Shoji maker of choice among design professionals. Perfect for passage doors, cabinets, pockets, & room dividers. Custom made of American hardwoods. Grid patterns to compliment a myriad of interiors. Durable facings include glass, acrylic, fabric. or backed paper. Commerical, hospitality, and residential projects. Hand-crafted in the U.S.A. 800-634-3268 www.cherrytreedesign.com

Cherry Tree Design

CIRCLE 166 ON INQUIRY CARD

Ancor Granite Tile

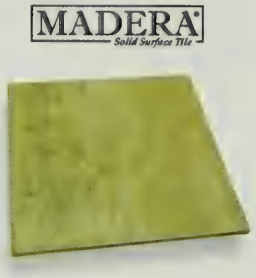


Ancor produces over fifty No. American and Imported granites in a full range of colors and finishes for residential, commercial and institutional use. Standard format is 12 x 12 x 3/8"; other sizes up to 18 x 18 x 1/2" available. Honed finish tile is particularly suitable for high traffic commercial areas, 435 Port Royal West, Montreal, Quebec, H3L2C3, Canada. Ph: 514-385-9366, Fax: 514-382-3533.

Ancor Granite

CIRCLE 167 ON INQUIRY CARD

Matrix Composites Inc.



Chosen by a distinguished panel of Architects for Architectural Record as one of the best new finishes for 1999, Madera Tile is made from an exciting new material known as Lignasil® Using 100% post-use hardwood in a patented process, Madera forges new ground in "green" building material technology. Several textures are available in an exciting range of solid colors and unique color blends for your sustainable design solutions. Call 800-767-4495. www.maderatile.com

Matrix Composites Inc.

CIRCLE 168 ON INQUIRY CARD

Interactive Whiteboard



The Rear Projection SMART Board™ is an interactive whiteboard that allows you to control projected Windows® or Macintosh® applications and other multimedia by pressing on the Board's large, touch-sensitive surface. Write over top of applications and your notes are saved for future reference and distribution. Architects and facility designers can request the SMART Product Kit by calling 888-427-6278 or by visiting www.smarttech.com/productkit

SMART Technologies Inc.

CIRCLE 169 ON INQUIRY CARD

Cornell Iron Works



The new Graphics Door from Cornell Iron Works puts bold, durable images at exterior and interior openings of retail, commercial, institutional, and industrial buildings. Images furnished by clients are applied to rolling door and rolling counter door curtains and hoods. The decorative, mural-sized graphics can reinforce corporate image, advertise products, salute communities, and more. Tel 800-233-8366; Fax 800-526-0841; www.cornelliron.com

Cornell Iron Works

CIRCLE 170 ON INQUIRY CARD

Turn the Ordinary Into the Extraordinary



Let Wausau Tile assist you in making your flooring and interior design shine with terrazzo tile and matching accessories. As the only domestic manufacturer of terrazzo tile, we have the unique ability to provide matching pieces such as copings and base, treads and risers, column covers, and so much more. Custom work is our specialty. Call 800-388-8728.

Wausau Tile

CIRCLE 171 ON INQUIRY CARD

Starphire Glass

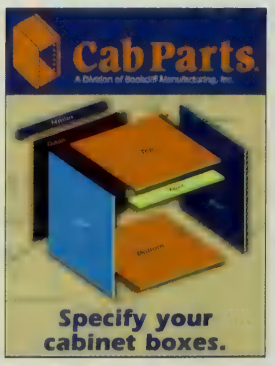


This design kit demonstrates why Starphire® glass is the clear choice for beautiful results. Vision, safety/security, spandrel, skylite, and interior glazings can sparkle from the jewel-like brilliance of ultra-clear Starphire glass. See for yourself why ordinary glass is green with envy: call 800-377-5267 to request a kit or a glass sample.

PPG Industries

CIRCLE 172 ON INQUIRY CARD

Specify This.



Did you know one of the most cost-effective ways to produce high-quality, frameless cabinet systems is CabParts? With over 1,500 sizes and types of cabinet boxes, CabParts are easily assembled to produce cabinet installations of superior quality. Precisely dimensioned, fixed pricing and high-density shipping mean you have more control over Division 6000 results than possible through alternatives. Call 970-241-7682 or visit our website for the full story. www.cabparts.com

CabParts

CIRCLE 173 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Hot Off The Press



Since 1927, plastic laminate has been recognized for its contemporary design, durability and cost/value over alternative options. VT Industries Inc., is offering a free special report that examines the development, advantages and surge in popularity of decorative laminates – once described by Time magazine as the "material of a thousand uses." Call VT Industries today to ask for the free special report at 800-827-1615, ext. 210.

VT Industries

CIRCLE 174 ON INQUIRY CARD

Shipping Worldwide



Architectural Pottery is a commercial manufacturer of large landscape planters & ethnic reproductions in FIBER-CRETE (GFRC) ARCHSTONE (FRP) & ENGLISH STYLE SANDSTONE (with GFRC). Architectural Pottery is the largest importer of handmade Greek & Italian terra cotta in the U.S. Highlight your latest project with the finest imported and custom made pottery available. Call now for a free catalog (888) ARCHPOT or visit www.archpot.com; fax: (714) 898-5109.

Architectural Pottery

CIRCLE 175 ON INQUIRY CARD

Gage Metal Ceilings



The Gage Corporation, Int., designs and manufactures the world's foremost collection of decorative metal ceilings. Design #447 (photo) is a good example of selective two-directional brushing with custom perforations from Gage's "Honest Aluminum" collection. Concealed suspension provides a clean monolithic appearance. Call the factory at 800-786-4243 for introductory samples and literature.

The Gage Corporation

CIRCLE 176 ON INQUIRY CARD

Site Furniture of Distinction

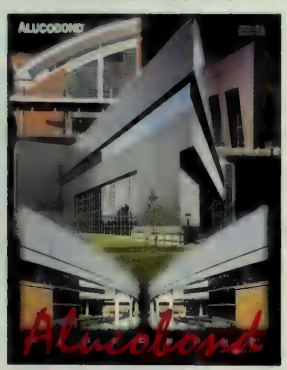


Keystone Ridge Designs, Inc. is the architect's choice for premier site amenities. Offering a full line of steel furnishings, we pride ourselves on exclusive designs and our patented powder coat finish, KEYSHIELD™ that is unparalleled in the industry. Quality, craftsmanship, and dedication to your creative vision are the hallmarks of Keystone Ridge Designs. For more information please call 800-284-8208 or e-mail: KeystonRdg@aol.com. www.keystoneridgedesigns.com

Keystone Ridge Designs

CIRCLE 177 ON INQUIRY CARD

New Alucobond® Materials Brochure



Totally new Alucobond® Material brochure in dramatic new format illustrates the use of Alucobond Material a variety of innovative applications and colors. Alucobond® Material is the original ACM (aluminum composite material) and has been used on more than 50,000 buildings worldwide. Alucobond Material is always the affordable solution. For more information, call 800-382-6445 or visit www.alusuisse-comp.com

Alusuisse Composites, Inc.

CIRCLE 178 ON INQUIRY CARD

Concrete Information & Buyers Guide



Research 40 concrete topics: countertops, pavers, ICF's, pool decking, decorative, etc. Locate 78 concrete services/products in over 200 US Metro areas in the buyers guide. Includes hard to find items such as fireplace surrounds, concrete animals, interior floors, play courts, site furnishings, slab jacking, etc. Free e-mail newsletter.

ConcreteNetwork.com

CIRCLE 179 ON INQUIRY CARD

Unique Early Childhood Furniture



GRESSCO, Ltd introduces HABA® a new line of children's modular Loft furniture, shelving, platforms and room partitions in addition to our existing array of KinderSystem™ reading furniture. Now you can create a truly unique children's area in your hospital waiting room, day-care center, church or library. Call GRESSCO today for a FREE catalog at 800-345-3480, www.gresscoltd.com

GRESSCO Ltd.

CIRCLE 180 ON INQUIRY CARD

Parallel Design Partnership Limited



"ellen's brackets," an anodized-aluminum shelving system designed by M Ali Tayar, provides an elegant alternative to existing bracket-and-track systems. Cantilevered brackets come in two sizes, for shelves 3/4 or 3/8-in. thick and 10-in. deep. Wall-mounted tracks permit 1 1/2-in. adjustment of wood, glass or plexiglass shelves. For more info phone Parallel Design Tel: 212-989-4959 Fax: 212-989-4977.

Parallel Design

CIRCLE 181 ON INQUIRY CARD

TO ADVERTISE: Call Ally Wingate at
T: 800-484-4042 ext.3042 — F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Panelfold's Decorative Accents! www.panelfold.com

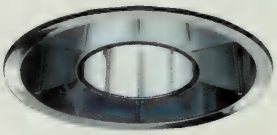


Caned panel inserts may be open or opaque; translucent inserts clear or amber; Transparent inserts allow view through the panels; Mirrored inserts and Carved detailing are available one or both sides. A wide variety of surfacing materials is available. Panelfold Electronic Library Version 3 on CD Rom available upon request by FAX 305-688-0185 or E-mail: sales@panelfold.com. Please visit our website: www.panelfold.com

Panelfold

CIRCLE 182 ON INQUIRY CARD

WILA Light-in-Light System

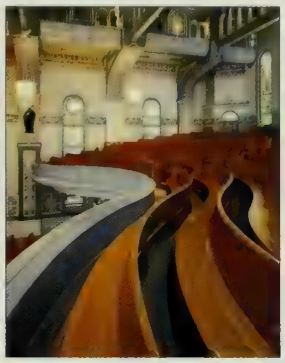


The WILA Light-in-Light system is available in two aperture sizes (10" & 15") & utilizes triple tube compact fluorescent lamps (18, 26, 32, & 42 watt) mounted vertically for maximum efficiency & even light distribution. The central concentrating reflector is computer designed for maximum efficiency & is formed of high purity (99.98 AL) aluminum with an inner finish of secular alzak & an outer finish of high reflectance powder coat white enamel which coincides with the finish of the broad beam outer reflector & cast trim ring.

WILA Lighting, LLC

CIRCLE 183 ON INQUIRY CARD

The Radius Curved Church Pew



Since 1919, New Holland Church Furniture has supplied churches nationwide with both custom & standard church furniture. Today, New Holland is the only manufacturer of "Radius Curved Pews" in the USA. As a certified member of the Architectural Woodwork Institute (AWI), you can be assured of our consistent high quality. New Holland has just developed all new product catalogs for our Pews & Solid Wood Chairs. New Holland Church Furniture, 313 Prospect St, New Holland, PA 800-220-1465

New Holland

CIRCLE 184 ON INQUIRY CARD

Xenon Luminaries

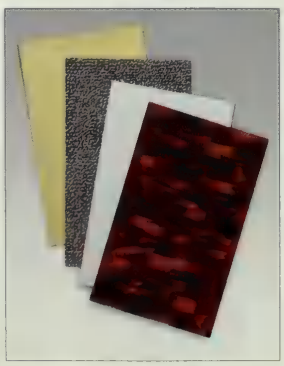


Space Cannon Illumination Inc. introduces the Litehose, the latest in linear lighting technology made of extruded, durable optical-grade acrylic. Available in different diameters and sizes, reflective paints and films are not required. The Focus is an architectural colored luminarie utilizing a 1200w lamp source designed to work with the Litehose or separately. 888-705-1028.

Space Cannon

CIRCLE 185 ON INQUIRY CARD

Unique Pre-Finished Metals



A new line of decorative, formable and durable prepainted metals is now available for your projects and product development. Available with a protective plastic film in dimensions to meet your specific requirements. Check out our web site at "alsacorp.com" to see other finishes and technical data. For brochure and metal samples call 800-999-4120, fax 818-887-4821, or by email: alsacorp@aol.com

ALSA Corporation

CIRCLE 186 ON INQUIRY CARD

Metal Building Product Systems from Centria Int'l



Centria Int'l is one of the world's leading suppliers of metal building product systems for architectural, commercial & industrial buildings applications. Our wall, floor & roof capitalize on the design freedom, durability & economy of metal structures while our team of engineers provide customized service at any project phase. No matter where in the world your next project may be located, rely on a century of experience from Centria Int'l. Visit www.centriaintl.com or call 800-759-7474.

CENTRIA International

CIRCLE 187 ON INQUIRY CARD

Boa Two-Circuit Track System

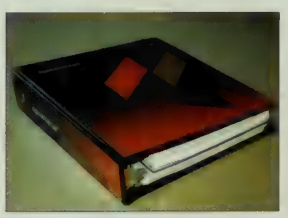


Bruck Lighting, the international leader in innovative low-voltage cable and track systems, introduces Boa, a low-voltage two-circuit track system with dual switching ability. Boa may be suspended or flush mounted, installed vertically or horizontally and is available in chrome or matte chrome. All Bruck Uni-lights fixtures can be utilized with Boa as well as all seven other Bruck track systems. www.brucklighting.com

Bruck Lighting Systems

CIRCLE 188 ON INQUIRY CARD

Copper in Architecture Handbook



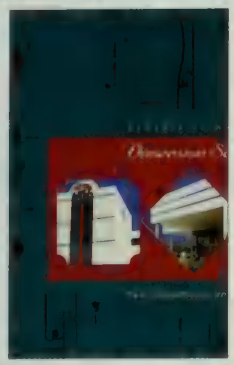
The *Copper in Architecture Handbook* is the most comprehensive source of information on copper in architecture available. It contains historical and contemporary design, installation techniques, as well as ideas, project samples, details, specifications, finishes and sources for manufacturers and contractors. Plus, there's complete coverage of copper properties, technologies and applications. $85. (800) CDA-DATA

Copper Development Assn.

CIRCLE 189 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Seminar Highlights Benefits of Foam Core Metal Roofs



The Metal Construction Association is offering a seminar that showcases the many advantages of foam core metal roofs, compared with competitive materials. It's enjoyable, interesting and informative – and you can earn AIA continuing education credits just for attending. Contact Centria at 800-759-7474 or Foam Core Metal Roof at 877-902-ROOF for complete details.

Centria

CIRCLE 190 ON INQUIRY CARD

Decorative Grilles



Unusual visual effects emerge when our grilles are designed for area effects. Versatility is the theme. R&G offers architects and interior designers many ways to express the changing forms of metal with the integrity of R&G's architectural grilles. Custom or standard finishes are available plus any grille can be made in matching color to blend with your decor. 202 Norman Ave., Bklyn, NY 11222. 800-521-4895, Fax: 718-349-2611.

Register & Grille Mfg Co.

CIRCLE 191 ON INQUIRY CARD

Ventilate All Baths With One Quiet Fan

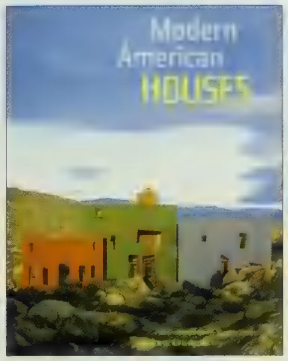


ALDES' MPV fan is designed for multiple and extensive duct runs. Remote mounting of fan assures almost silent operation. Up to 6 exhaust points at 50 cfm each. Equipped with a continuous duty motor, the MPV may be used also to provide IAQ Ventilation. Super Quiet, Powerful & Versatile. 3 year warranty. Cost Effective. American ALDES Ventilation Corp. 4537 Northgate Court, Sarasota, FL 34234, Call 800-255-7749, www.americanaldes.com

American ALDES

CIRCLE 192 ON INQUIRY CARD

Modern American Houses



This 230-page book is packed with color photographs of more than 75 houses featured in Record Houses since 1956. New essays explore the evolution of home design decade by decade–Thomas Hines on the '50s, Robert Campbell on the '60s, Suzanne Stephens on the '70s, Charles Gandee on the '80s and '90s. $49.50. To order please call 212-904-4635.

Record Houses

CIRCLE 193 ON INQUIRY CARD

Justice Facility Partnerships

Save the Date!

Charlotte, North Carolina
October 5–7, 2000

SPONSORED BY

THE AIA

COMMITTEE ON

ARCHITECTURE

FOR JUSTICE

- Three-day conference focusing on Justice Facility Partnerships and Leading-Edge Justice Technology
- Multiuse, regional, and multijurisdictional facilities and public-private partnerships
- Trends in justice technology: security electronics, hardware and software, premanufactured cells and modular construction
- Charrette with architecture students from the University of North Carolina in Charlotte on design of a justice facility
- Tour of Mecklenburg County Jail and Courthouse Complex

AIA

Look for your registration brochure this summer.

Conference information will be available on the AIA's Web site in July 2000 (www.e-architect.com/pia/caj).

POSITIONS VACANT

Submit your resume today!

Professional and technical employment opportunities available in various disciplines and locations.

Interesting

Architects and Designers who look for interesting, challenging and rewarding design work can explore HSMM opportunities at:
www.hsmm.com

Challenging

Please submit your resume and letter of interest via mail or email. Indicate position and location.

Rewarding

Hayes, Seay, Mattern & Matttern, Inc.
Director of Production
P.O. Box 13446 Roanoke VA, 24034
ejanney@hsmm.com

HSMM
ARCHITECTS ENGINEERS PLANNERS
EOE/AA

MICHAEL LATAS & ASSOCIATES

Executive search and professional recruiting services. Serving the construction industry exclusively nationally and internationally since 1975.

Your premier source for executive, managerial, and difficult-to-fill professional-level needs. Contact our Architecture/Engineering Division.

MICHAEL LATAS & ASSOCIATES
1311 Lindbergh Plaza Center
St. Louis, MO 63132

(314) 993-6500 ▪ Fax: (314) 993-0632
(800) 280-7811 • http://www.Latas.com

LABARGE ENTERPRISES

REGISTERED ARCHITECTS AND ARCHITECT ENGINEERS' FOR DESIGN-BUILD PROJECTS IN TV-BROADCAST STUDIOS, HOSPITAL AND HEALTH CARE, E-COMMERCE BUILDINGS DATA PROCESSING AND CALL CENTERS AND TELECOMMUNICATION FACILITIES. POSITIONS NATIONWIDE — FAX 972-980-0090 WEBSITE WWW.HARDHATJOBS.COM

ARCHITECT

Great opportunity for project architect with 5+ years in multifamily construction. outstanding benefits, flexible work environment. Fax resume (512) 452-6439. Austin, TX.

Visit our Web Site
www.architecturalrecord.com

PROJECT ARCHITECT

We all hear talk about the fastest growing method of project deliver, Design/Build... now come experience it with Vermont's largest integrated planning, architecture and building firm, Bread Loaf Corporation. Established in 1968, Bread Loaf offers one of the largest Design/Build architectural offices in the area. To further expand our design services, we are seeking a passionate Project Architect with exceptional design and technical experience in commercial, healthcare, institutional and industrial markets. Ideal candidates will have strong design and project management skills, fee and contract negotiation experience and a desire to work in a team environment. Ability to respond to key issues of cost, scheduling and constructability to create exceptional architecture preferred.

Named after one of Vermont's most prominent peaks, Bread Loaf offers a challenging and multi-disciplinary career opportunity. Excellent compensation, benefits and work environment completes this exceptional package.

Send your resume to:

Bread Loaf Corporation
Mary Mitiguy
1293 Route 7 South
Middlebury, VT 05753
Phone: (802) 388-9871
Fax: (802) 388-3815
Email: mmitiguy@breadloaf.com
www.breadloaf.com

Bread Loaf CORPORATION Planners Architects Builders

COLORADO
You know you want to.
The AIA Colorado Job Board. www.aiacolorado.org

PRINCIPAL - VICE PRESIDENT OF PROJECTS
DAVID OWEN TRYBA ARCHITECTS
DENVER, COLORADO

David Owen Tryba Architects (DOTA), an exciting, high-design, high-energy world-class architectural firm, is seeking an exceptional manager to serve as its Vice President of Projects. Located in Denver, Colorado, DOTA is one of the premier firms in Denver, and was recently awarded in international competition the new $125 million Denver City & County Building project. VPP Responsibilities include: Guiding high quality projects from proposal to completion; staffing of and budgeting for projects; developing long term relationships with clients, contractors and engineers; and working directly with the president and CFO to guide this rapidly growing 45 person firm. Requirements include: 20+ years experience as an architect with at least 10 years of project management experience with a staff of 65+ employees; must also be a high energy, dynamic individual who has a passion for and is committed to superior, world-class architecture; have excellent communication skills, a strong ability to create and maintain lasting client relationships, and have a track record of completing projects on time, within budget and with exceptional quality. Strong executive presence & an exceptional ability to motivate project managers, architects & clients is a must. DOTA offers a very competitive compensation package and a work environment based at the foothills of the Rocky Mountains. If you are our person, we want to hear from you. Send your resume in confidence to our consultants: Beale International, 1571 Race Street, VP368AR, Denver, Colorado 80206; fax (303) 377-9766; e-mail: bealeinc@aol.com

ARCHITECT

No Exp. Req. Research, plan, design & admin. projects. Use CAD, PhotoShop, Form 2 & Illustrator. Determine functional & spatial requirements. Prepare info. regarding design, specifications, materials, color, equipment, costs & time. Layout of project and integrated engineering elements into unified design. Drawings & contract docs. On-site observation. Req: Bach. deg. in Architecture. 40 hr. wk. Job interview site: LA, CA. Send this ad & resume to Altoon & Porter Architects LLP, P. O. Box 361515, LA, CA 90036.

ARCHITECT

Perform architectural work under the direction of a licensed architect, and pursuant to client's specifications. Research, plan, design, and administer single and multi-family residential as well as small commercial projects. Consult with clients to determine functional and spatial requirements. Execute preliminary and construction drawings, including architectural, electrical, mechanical, plumbing and structural drawings, subject to approval of a licensed architect. Conduct field verifications and measurements at the work site. Prepare blueprints and modify designs, as necessary. Estimate cost and construction time. Maintain sample and catalogue library. Operate AutoCAD, MS Word, Amipro and Lotus softwares. Manage AutoCAD stations. Perform office support functions whenever necessary. Requirements: B.S. Architecture, 1 yr experience as Architect of Jr. Architect-Designer. 40 hrs/wk; 9 a.m. - 5 p.m. Salary: $34,500/yr. Location: Chicago, IL. Applicants must show proof of legal authority to work in the U.S. Send 2 copies of resume and cover letter to: Illinois Department of Employment Security, 401 S. State St. - 7 North, Chicago, IL 60605. Attention Bert Grunnet. Reference #V-IL-22519-P. An employer paid ad. No calls.

CITY OF ONTARIO HOUSING AGENCY
PART 150 PROGRAM
REQUEST FOR STATEMENTS
OF QUALIFICATIONS
PROFESSIONAL ARCHITECTURAL SERVICES
FOR NEW RESIDENTIAL SOUND
INSULATION PROJECT

NOTICE IS HEREBY GIVEN that the Housing Agency of the City of Ontario, California, will receive up to, but no later than 5:00 p.m. on September 22, 2000, statements of qualifications for professional architectural services for the new residential sound insulation project. The project will consist of soundproofing approximately 400 dwellings near Ontario International Airport. Included are single family detached homes, duplexes and multi-family structures. Typical improvements include the installation of acoustical windows and doors, attic insulation, central heating, ventilation and air conditioning systems, etc. The consultant's general scope of work consists of: conducting architectural surveys, preparing thorough building deficiencies assessment reports, preparation of construction cost estimates and bid documents, construction management, etc. The estimated construction cost is in excess of $5.0 million. Qualified consultants must be familiar with FAA, local and State of California standards and requirements for similar types of projects. The FAA and Los Angeles World Airports will fund the project. Because of a significant number of Spanish-speaking participants, it is essential that the selected consultant have staff members who are fluent in Spanish, assigned directly to the project. Each response must conform to the Agency's Request for Statements of Qualifications document. Copies of the RFQ document may be obtained by FAX request to the Ontario Housing Agency at (909) 395-2300. Small, Minority and Women-owned businesses are encouraged to respond. City of Ontario Housing Agency, Part 150 Program, Sigfrido G. Rivera, Project Manager, (909) 395-2291.

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

ASSISTANT PROFESSOR
DEPARTMENT OF ARCHITECTURE

Ball State University
Muncie, Indiana

The Department of Architecture is located in the College of Architecture and Planning along with the Departments of Urban Planning and Landscape Architecture. Also residing there are the Housing Futures Institute, Land Design Institute, and Community Based Projects. Along with the professional degree in architecture, a master's in historic preservation is offered as well as a post-professional degree in architecture. The nationally recognized Center for Energy Research, Education, and Service is co-located in the CAP building. Ball State University and the Department of Architecture include internationalization and information technology as hallmarks of excellence and stress both teaching and research. Two full-time, tenure-track positions available August 17, 2001. Rank dependent on qualifications.

Position 1

Responsibilities: teaching design studios and courses in computer design; providing leadership in developing the curriculum in the area of computational tools for designing. Minimum qualification: master of architecture degree or master's degree in a related field with curriculum equivalency. Preferred qualifications: registration (license to practice architecture), quality of design work and/or evidence of contributions to the profession through practice and service; record of previous teaching experience and commitment to work in a collaborative environment; publications and/or appropriate research work as evidence of scholarly contributions.

Position 2

Responsibilities: teaching design studios and in one or more areas such as architectural professional practice and technology. Minimum qualification: master of architecture or master's degree in a related field with curriculum equivalency. Preferred qualifications: professional registration in architecture; record of excellence in professional practice, teaching, and/or scholarship.

Send letter of application identifying position sought; curriculum vitae; three letters of reference; official transcript of highest degree earned; samples of student and/or professional work; and evidence of teaching, practice, and/or research ability to:

Chair, Search Committee
(Specify Position 1 or 2)
DEPARTMENT OF ARCHITECTURE
Ball State University
Muncie, IN 47306
Tel: 765.285.1900 / Fax: 765.285.1765
www.bsu.edu

REVIEW OF APPLICATIONS WILL BEGIN MARCH 1, 2001, AND WILL CONTINUE UNTIL THE POSITIONS ARE FILLED.

Ball State University is an equal opportunity, affirmative action employer and is strongly and actively committed to diversity within its community.

ARCHITECT / CAD DRAFTER

Prepares detailed drawings of architectural designs and plans for buildings, according to specifications, sketches, and rough drafts provided by architect. Uses CAD equipment and software. B.S. Architecture, two years experience in job offer with two years CAD software and Norton Utilities. M-F 8 a.m. to 5 p.m. $15.40 per hour. Job locale/interview: Escondido, CA. Send this ad and your resume/letter of qualifications to Job #MMO 50221, P.O. Box 269065, Sacramento, CA 95826-9065.

ARCHITECTURAL DRAFTER

Draw up plans/specs for commercial, industrial, residential bldgs, especially structural reinforcing materials to be used. Recommend materials to be used & estimate quantity req'd. Perform modifications in dimensions, material or other aspects of design. F/T. BS in Architecture or Architectural Eng + 2yrs exp. Send resume to Han & Kim Construction, Inc. 3700 Wilshire Blvd #532, L.A., CA 90010. E-mail: Hyohan@msn.com

WALLACE ROBERTS, &TODD, LLC

Seeks talented architects at levels of experience. Projects include libraries, gymnasiums, community centers, corporate office buildings, private schools, college dormitories and senior and affordable housing, all with an approach based on strategic planning, environmental sustainable design. E-mail resumes to: Grosenthal@ph.WRTdesign.com

INTERIOR DESIGNERS/ARCHITECTURE/ FURNITURE DEALERSHIPS

American Personnel specializes in corporate designers and furniture specialists, established since 1969, are in constant search for prospective employees, to fill our various job opportunities with our national clients. Project Managers/Ast. Project Mgrs/Sales Associates/Sales Asts./AutoCAD Operators/administrative Support /Entry-level Designers. Clients are based out of New York City, New Jersey, and other locations. For more details on our services, please feel free to call Frank Cassisa - Executive V.P., Ph: 212-233-2900, Fax: 212-233-3043 or after 7pm at 732-360-0655.

INTERIORS
MID TO SENIOR LEVEL DESIGNER
SAN DIEGO

Use AutoCAD to design/plan space layout and interior furnishings for commercial buildings. Experience with healthcare facilities a plus. Architect or Interior Designer. Must be comfortable with very interactive design process and possess excellent communication skills. Position offers competitive salary/benefits, including relocation allowance. Visit our website at www.stichler.com. Fax or e-mail resume for consideration. THE STICHLER GROUP, INC. 9655 Granite Ridge Drive, San Diego, CA 92129/Fax: 858-569-3440; resumes@stichler.com

ARCHITECT

Excellent career opportunity to become a "Key Member" of a growing, dynamic architectural and engineering firm in Holiday, FL — just 30 mins. north of Tampa and the beaches. Immediate openings for architects and designers with experience on mid-size commercial projects. Proficiency in ACAD 14 is a mandatory requirement. Tel: (727) 938-1516; Fax: (727) 942-4174.

ARCHITECTS/TECHNICIANS

Architects & technicians with interest in theatre design and working with leading architects for Connecticut based international theatre consultants. Fax resume to Brian Hall, Theatre Projects, 203-431-4790. Visit our website at www.tpcworld.com

ARCHITECT

Architect wanted by Architecture, Planning & Managing Firm in Houston, TX. Must have Masters in Architecture & 4 yrs exp in highrise building dsgn, code checking & 3-D studio presentations. Respond to: CC Lee, AIA, STOA Int'l, 7322 S.W. Freeway, #808, Houston, TX 77074.

INTERN ARCHITECT

Intern Architect (Santa Fe, NM) Dsgn plans for commercial, retail & residential projects for clients, applying knowl of Dsgns plans for commercial, retail & residential projects for clients, apply knowl of local bldg materials, construction, methods, zoning, bldg codes. Dsgn interiors per client & functional use reqmts. Consult w/engineers & clients to determine functional & spatial reqmts of projects. Prep construction documents & specs. Monitor construction on periodic basis for compliance. Utilize AutoCAD s/ware & dsgn/desktop publishing s/ware to prep project dsgns & plans. Draft architectural proposals for clients. Masters Deg in Architecture + 3 yrs exp in job offd w/2 yrs exp w/local bldg materials, interior dsgn & preparation of construction documents. 40 hr/wk. $23/hr, OT 5-10 hrs at $34.50/hr. Must have proof of legal authority to work in the US. Application by resume to New Mexico Dept of Labor, One Stop Career Ctr, 301 W. DeVargas, Santa Fe, NM 87501 referring to JO#NM1026423.

ARCHITECTS, ENGINEERS, INTERIOR DESIGNERS, CADD SPECIALIST

L. Robert Kimball & Associates (www.lrkimball.com), a nationally acclaimed A/E firm, has immediate openings in its regional West Chester, PA office and corporate office in Ebensburg, PA for experienced Architects, Designers and CADD Specialists to design educational and institutional facilities. Positions require bachelor level degree, min.3 yrs. experience, AutoCAD proficiency, interior design experience a plus. Additional opportunities exist for Mechanical and Civil Engineers. Registration preferred. EOE M/F/V/H Send resume to: Deborah C. Locke, Corporate Recruiter, e-mail hmnres@lrkimball.com Fax: 814 472-7712, Mail: West Chester Position, L. Robert Kimball & Associates, 615 W. Highland Avenue, Ebensburg, PA 15931

FACULTY POSITIONS VACANT

ASSISTANT PROFESSOR

Rice University invites applications and nominations for a tenure track appointment at the level of Assistant Professor. This full time position is available beginning 2001 for a person qualified to conduct design studios and lecture courses at both the graduate and undergraduate level. Candidates should hold a Master of Architecture degree or its equivalent. Prior teaching experience and a record of scholarly work in related studies are desirable. Applications will be considered until 15 October 2000. Letter of interest, curriculum vitae, 3 pages of design work, and the names of 3 references should be forwarded to: Dr. Nana Last, Chair, Faculty Search Committee, Rice University, School of Architecture, MS-50, 6100 Main St., Houston, TX 77005. Rice University is an equal opportunity/affirmative action employer. Applications from women and minority candidates are encouraged. Rice does not discriminate on the basis of race, color, religion, sex, sexual orientation, national or ethnic origin, age, disability, or veteran status.

BUSINESS OPPORTUNITIES

FIRM FOR SALE

20 year firm in a growing NE Florida Coastal Community specializing in high end custom homes and design intensive commercial work. Beautiful location. Includes current client base, contracts, and assets. Excellent staff. Call (888) 312-9605. Leave message. All calls will be returned. Confidentiality a must.

FIRM AVAILABLE

Midsize Denver Architectural firm available for acquisition. Client base established over a twenty-year period and current projects reflect an 80% repeat Client ratio. Excellent opportunity to expand into the active Denver market. Submit letters of interest to P.O.Box 481104, Denver, CO 80248-1104.

COMPUTER SERVICES

Power, Functionality & Attention to Detail



FLATLAND

...Abundant 2D Tools; Easy to Learn and Use...
...Powerful and Useful...
Cadalyst Magazine, October 1996

Call (800) 247-2032 for Free Working Demo

FLATLAND 6... Serious Two Dimensional Drafting for Building Design Professionals

Ashcraft Architectural Computer Graphics
220 Glen Street, Falls, NY 12801 (518) 798-4631 (800) 247-2032

Circle 194 on Inquiry Card

SPECIAL SERVICES

GreenwayConsulting (800) 726-8603 www.GreenwayConsulting.com

Premier Research, Consulting and Publishing for A/E/C Entrepreneurs

Almanac of Architecture & Design

There is no other book like the annual 600-page *Almanac of Architecture & Design*. It is the industry's definitive reference with hundreds of categories of information on individuals, organizations, schools, awards, and much more. Available through fine booksellers; softcover, $34.95 (est).

RENDERINGS

ARCHITECTURAL RENDERINGS

Fortune 500 clientele, Watercolor: 11" x 17" $1,499 + tax, 3 days. 12" x 22", $2,899 + tax, 5 days. Visa, MC, AmEx. Mayron Renderings, (212) 633-1503 or (800) 537-9256. Email: mayronrend@rcn.com

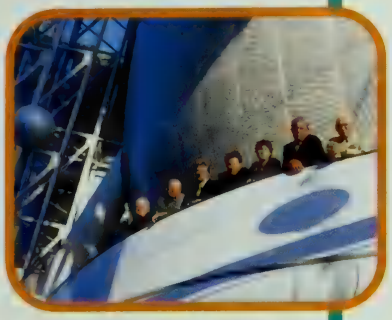
ARCHITECTURAL RENDERINGS BY STUDIO R22

Outstanding photo-realistic renderings, 3D models, walkthrough animations and other visualization services. Competitive prices. Visit us at www.studior22.com

ARCHITECTURAL RECORD: (ISSN 0003-858X) Vol. 188, No. 9. Published monthly by The McGraw-Hill Companies, 1221 Avenue of the Americas, New York, N.Y. Periodicals postage paid at New York, N.Y. and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 246565. Registered for GST as The McGraw-Hill Companies. GST No. R123075673. **POSTMASTER:** *Please send address changes to* ARCHITECTURAL RECORD, Fulfillment Manager, P.O. Box 566, Hightstown, N.J. 08520. **SUBSCRIPTION:** Rates: U.S. and Possessions $59; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $8; for foreign $10.

WHAT WAS THE POLSHEK PARTNERSHIP THINKING?

For an
out-of-this world
look inside the designers
of the Rose Planetarium
and more ...



CLICK
INTERVIEWS
ON
WWW.architecturalrecord.com

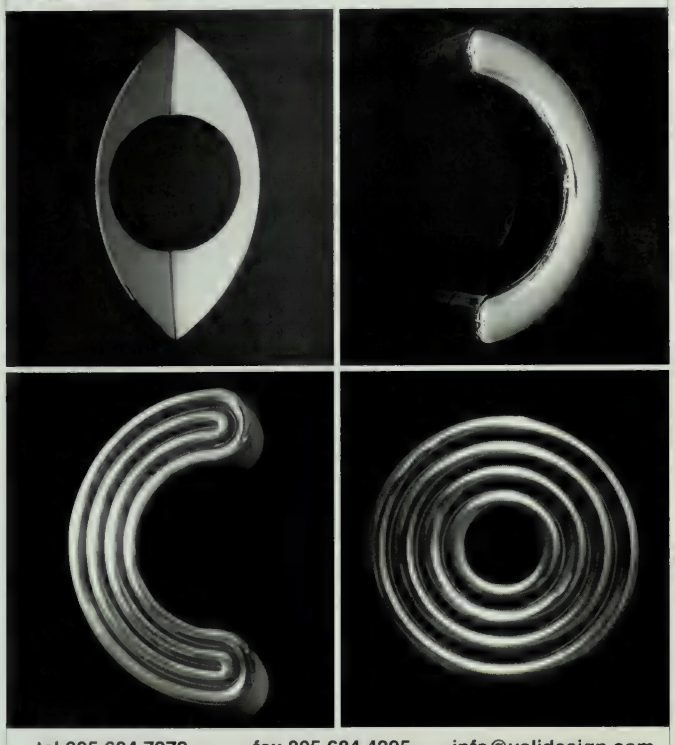
Revealing insights, ideas and inspiration from POLSHEK PARTNERSHIP, FRANK GEHRY, RICARDO LEGORRETA, SANTIAGO CALATRAVA and more ... *are just a click away.*

Don't miss a word. Find the complete text from exclusive *Record* interviews with leading architectural visionaries, plus profiles of intriguing artists and designers from a variety of media.

INTERVIEWS SPONSORED BY revit

ARCHITECTURAL RECORD
McGraw Hill Construction Information Group
A Division of The McGraw-Hill Companies

VOLI Great entrances deserve great doorpulls



tel 805 684 7372 fax 805 684 4295 info@volidesign.com

CIRCLE 102 ON INQUIRY CARD

Building BIG



with David Macaulay
A new series exploring the world's greatest engineering feats
October 2000—only on PBS

pbs.org/buildingbig

BUILDING BIG™ is a coproduction of the WGBH Science Unit and Production Group, Inc.
WGBH

Major funding is provided by the National Science Foundation.

Additional funding comes from the National Endowment for the Humanities, The Arthur Vining Davis Foundations, the Corporation for Public Broadcasting, and public television viewers.
NATIONAL ENDOWMENT FOR THE HUMANITIES
The Arthur Vining Davis Foundations
cpb

National sponsorship is provided by the American Society of Civil Engineers and by Siemens.
ASCE 1852 2000
SIEMENS

Illustration by David Macaulay for WGBH Boston © 2000



You don't stay in business for nearly 70 years without being a smart marketer. That's why AFCO USA takes advantage of the Sweet's marketplace with a dynamic digital presence in Sweet's CD and sweets.com and print marketing programs in Sweet's General Building & Renovation Catalog File, Sweet's GBR Facilities Owners Edition, Contract Interiors Catalog File and Sweet's Directory.

AFCO USA understands that when AEC professionals need product and specification information, they turn to Sweet's. An integrated program in Sweet's gives AFCO direct access to marketplace members at the very moment they're ready to specify and purchase. Now that's smart.

Sweet's Group
McGraw Hill Construction Information Group

CIRCLE 103 ON INQUIRY CARD

Sweet's
Construction's Product Marketplace℠

The Most Manufacturers.
The Most Buyers.
The Most Opportunity.

sweets.com is part of the **construction.com** network

A Division of The McGraw-Hill Companies



eProject Lead Manager. The most constructive way to manage the entire sales process.

Building on the power of the F.W. Dodge project news service, eProject Lead Manager combines extensive project news content with the interactivity to mobilize your team to action at any point in the bidding process.

With eProject Lead Manager, sales leads, customer relationships and market information can be tracked and managed with the speed, flexibility and security you need to keep the leads coming, the internal dialogue flowing and the sales process moving. Sort, track and compare leads. Develop sales strategies. Add notes and tasks, update project status and much more. Day and night, from anywhere. At the speed of the Internet. With no new technology required.

Visit www.construction.com

To see for yourself how eProject Lead Manager can help you manage your products and services more productively, visit construction.com for a brief overview, or call 1-800-FW DODGE.

F.W.DODGE

McGraw Hill Construction Information Group

The Most Comprehensive, Most Accurate, Most Used Source of Construction Information.

CIRCLE 104 ON INQUIRY CARD

A Division of The McGraw-Hill Companies



Two who bring architecture to the movies (and the masses)

Interviewed by Elizabeth Harrison Kubany

Production designer Robin Standefer and art director Stephen Alesch have designed more than 10 films together, including Practical Magic, Search and Destroy, *and* Addicted to Love*—but their work is so sophisticated it seems insufficient to call it set design. Unlike many production designers whose background is in theater, Standefer is an art historian and painter by training and Alesch an architect. From their collaborations in films, they have formed a creative partnership that has grown to include an architectural, interior, and furniture design company called Roman & Williams.* RECORD *caught up with the peripatetic pair as they were finishing their latest project.*

Q: *How would you describe what you do?*

Robin Standefer: We sometimes think of ourselves as archaeologists working in reverse. Rather than discovering objects and envisioning the society that left them, we have to imagine the end result first and then layer the details and objects to create that mood.

Stephen Alesch: It's our job to create a complete reality in which the action of a movie can take place. Production design is very comprehensive. We begin with the architectural concept and then design every detail.

Doesn't that require extensive research?

RS: Every single object that appears in one of our movies represents a design decision which we have researched endlessly. But we really use the research to intoxicate and inspire ourselves. At a certain point, we leave the books and begin to invent a new reality based in history but with a modern viewpoint.

SA: We call it historical minimalism because, while we are committed to accuracy, we use detail sparingly. Nothing is superfluous. Everything is seen through contemporary eyes, but we are using historic elements.

RS: But we're not historicizing. We are always searching for the tension between the historic and the modern.

Is this an aesthetic issue or a philosophical one?

SA: Both. Because of the research and the attention to detail, our designs have an underpinning of truth. We don't fake it. If we were to settle for fake history, we would be condescending to our audience. We try to evoke the spirit of another time and place.

RS: Architecture has amazing power. We just finished working on a film called *Caveman's Valentine* for which we had to design a set to represent the inside of a man's skull. We went straight to Gothic architecture, then we added layers; we researched skeletal structures, ancient crypts, and Gaudi's architecture and created a collage. The result was an eeriness and a mystery that you could almost smell.

You've created a Beverly Hills boutique, a SoHo loft, an abandoned printing shop, even a complete Victorian house with a greenhouse and gardens. What's next?

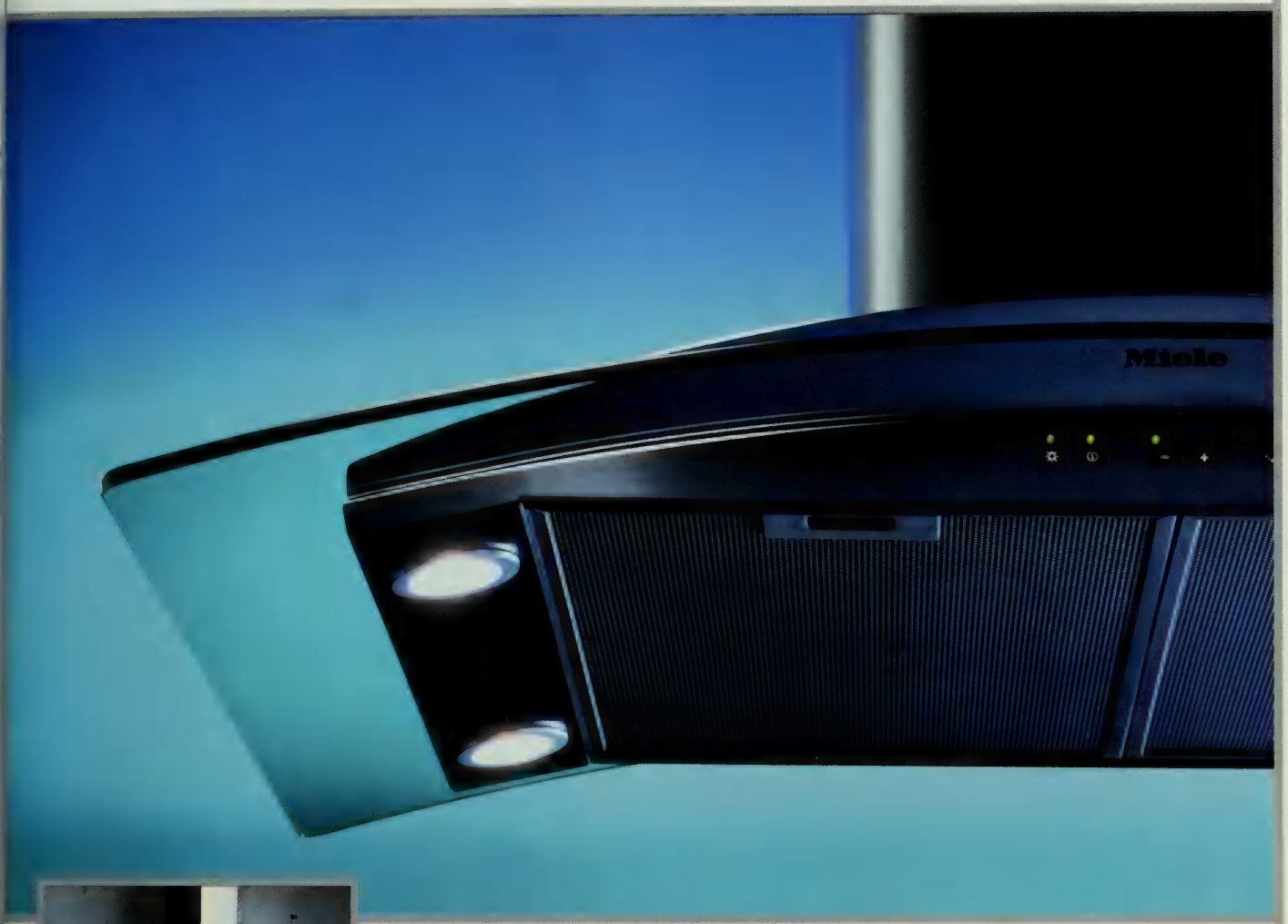
RS: We dream of designing buildings or interiors that the public will really use with the same sense of narrative, the same respect for architecture and objects, and the same holistic vision we bring to our movies.

SA: When you design for films, all of your work gets dismantled and put into storage when you are finished shooting. Our real goal is to build a building that people will enjoy for hundreds of years.

Photograph by Jim Morrison

WWW *Find other interviews at* **Interviews** *on:* **www.architecturalrecord.com**

THE PROJECT REQUIRED SUPERB VENTILATION, AND OVER 1,600 DESIGN CHOICES...





MIELE DELIVERED.

The new Miele collection of decorative ventilation hoods, finished with a choice of finely crafted brushed stainless steel or a vast spectrum of custom-colored enamels, adds up to over 1,600 design possibilities. Elegantly dramatic, there is a model suitable for virtually any setting.

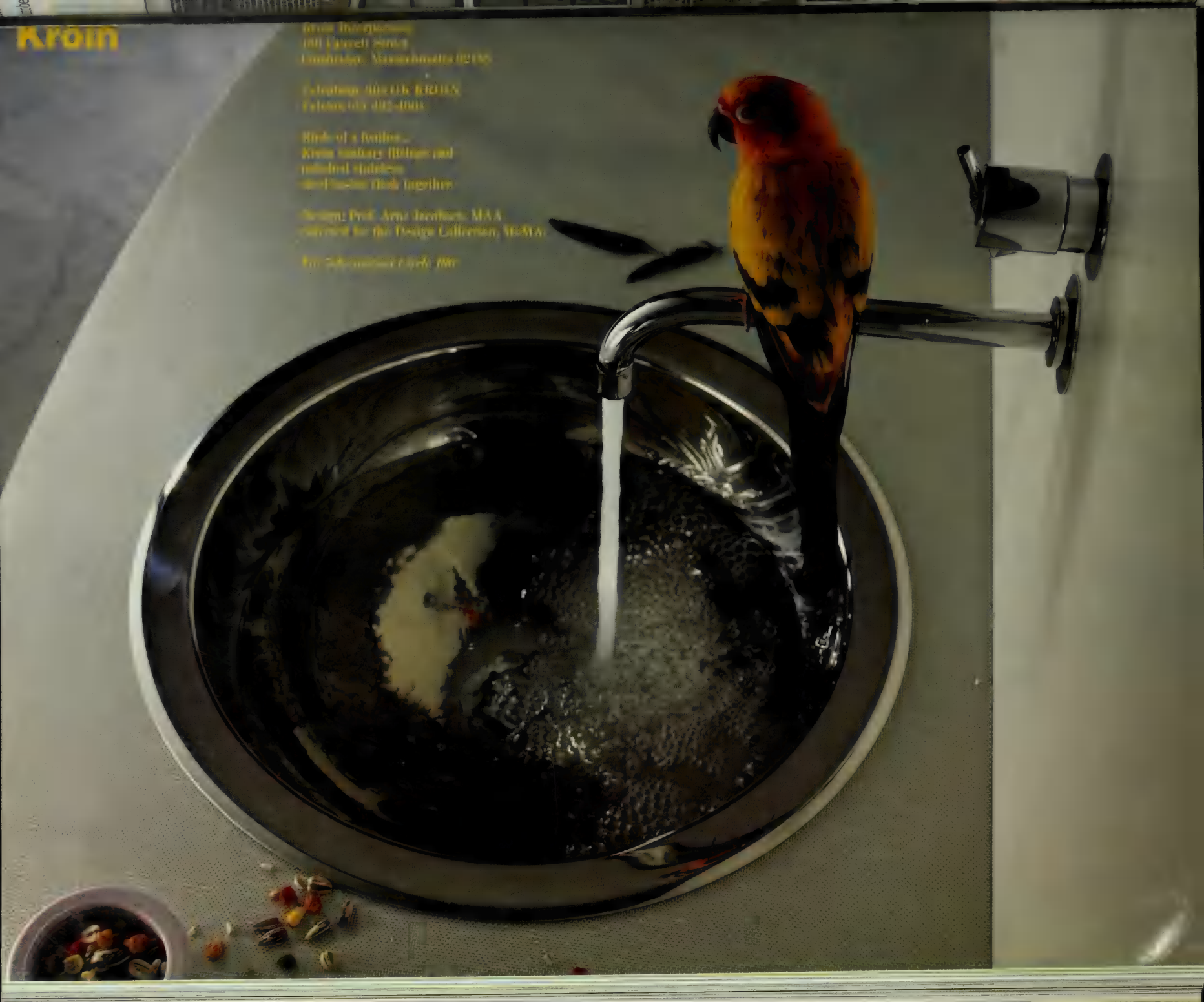
Whether wall-mounted or above an island, each of these hoods is quiet yet powerful, keeping kitchens clean and odor-free. Integral halogen lights, an optical display and precision touch controls are just a few of their sophisticated features. Adding to the design flexibility, Miele also offers several ventless options, as well as sleek built-in ventilation hoods.

To learn more about versatile Miele ventilation solutions, and to access all the services of the Architects & Designers Resource Group, call 800-843-7231, or visit us at www.mieleusa.com.

Miele
ARCHITECTS & DESIGNERS
RESOURCE GROUP

Princeton • Beverly Hills • Boca Raton • Northbrook • San Francisco • Wellesley

CIRCLE 105 ON INQUIRY CARD


Kroin

ectural Record
October

ITECTURAL RECORD

BURLINGAME PUBLIC LIBRARY
3 9042 05166990 8



Ever-changing Pavilion
Steven Holl Bridges Thought and Feeling

Business Week/ Architectural Record Awards

ILADELPHIA'S PSFS: Domesticating a Landmark

ESIDENTIAL: Houses in the Landscape

BURLINGAME
OCT 26 2006
LIBRARY

The harmonious integration of architecture, furniture and technology

pathways@work



"Who really rules in a well-designed work environment?

The people."

Rich White
Director of [illegible]
[illegible]proach.com



Rich White and his teammates had an unusual goal

when they set out to create a new work environment:

Synchronize architecture, furniture and tehnology

and let people organize

and re-organize it themselves,

as they wish,

when they wish–

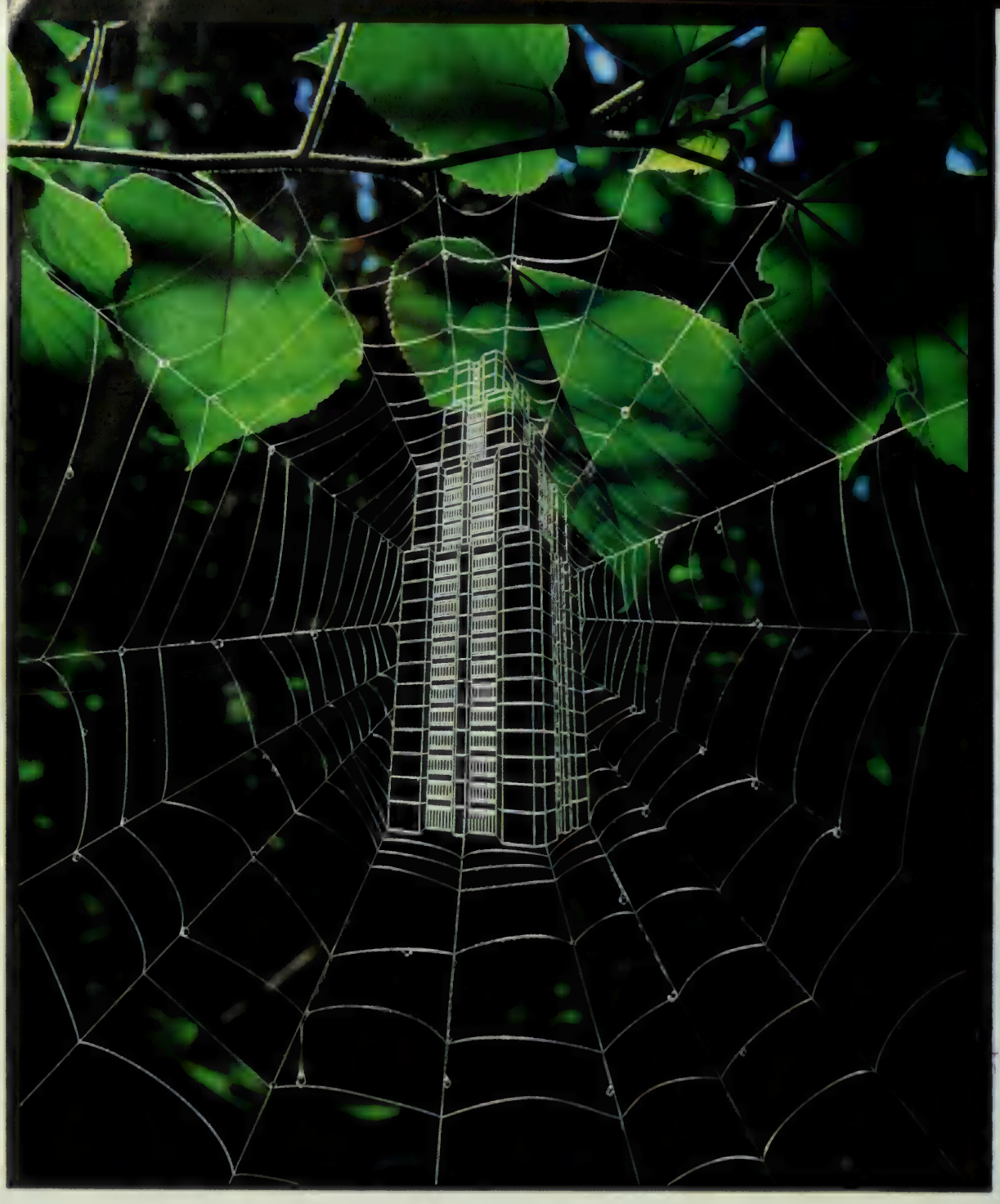
at the drop of a hat.

And Pathways® products let them do just that.

What happens when
the people rule?
See for yourself at
www.steelcase.com

Steelcase®

CIRCLE 2 ON INQUIRY CARD



AUTOCAD LT 2000i

SUDDENLY DESIGN IS A WHOLLY CONNECTED PROCESS.

Now it's easier than ever to get your entire design team wired and working together. AutoCAD LT 2000i combines 100% AutoCAD® 2000 & 2000i compatibility with Internet collaboration and professional 2D CAD features. It's the complete low cost productivity tool for connected environments.

autodesk®

Order your free 30-day trial CD at www.autodesk.com/connected

©2000 Autodesk, Inc. Autodesk, the Autodesk logo, 3D and AutoCAD LT are registered trademarks of Autodesk, Inc. in the United States and/or other countries

ARCHITECTURAL RECORD

10.2000



News

34 Gore v. Bush: Where they stand

42 NEA funds public works competitions

Departments

19 Editorial: Keep off the grass*

24 Letters*

57 Correspondent's File: Cranbrook *by John Gallagher*

63 Practice Matters: Preservation tax credits *by Charles Linn, AIA*

67 Critique: European competitions *by David Cohn*

71 Books: The powers of ten *by Clifford A. Pearson*

75 Exhibitions: Shaping the Great City *by Clifford A. Pearson*

79 Snapshot: Hoberman Retractable Dome *by Ingrid Whitehead*

280 Profile: Anthony Benton Gude *by Charles Linn, AIA**

Features

84 Business Week/Architectural Record Awards*

Good design pays off: This year's 10 award winners prove that good business isn't just for businesses anymore.

110 Marcel Breuer: A Memoir *by Robert F. Gatje, FAIA*

A new book explores the life of this modern master of materials.

Projects

118 South Carolina Aquarium, *Charleston, S.C.* *by Lynn Nesmith** *Eskew +*

Overcoming numerous obstacles, a waterfront aquarium lives.

126 Het Oosten Headquarters, *Amsterdam* *by James S. Russell, AIA* *Steven Holl Architects*

A Dutch pavilion that challenges the way we perceive architecture.

136 Project Diary: Loews Philadelphia Hotel *by Suzanne Stephens** *Bower Lewis Thrower*

The landmark PSFS Building gets reincarnated as a hotel.

Building Types Study 790

151 Libraries: A New Chapter *by Abigail A. Van Slyck*

Architects heed new educational needs, and reshape libraries.

154 Queens Borough Library, *Flushing, N.Y.* *by William Weathersby** *Polshek Partnership*

158 Rauner Special Collections, *Hanover, N.H.* *by Suzanne Stephens** *Venturi, Scott Brown and Associates*

162 Timberland Library, *Belfair, Wash.* *by Sheri Olson, AIA** *Carlson Architects*

166 Biblioteca Latinoamericana, *San Jose, Calif.* *by Lisa Findley** *Steven Ehrlich Architects*

Building Science & Technology

173 Creating sleek metal skins for buildings

*by Charles Linn, AIA**

181 Tech Briefs

185 Digital Architect: Emerging Standards *by Jerry Laiserin, FAIA**

Residential

197 Introduction

199 Residential Briefs

200 Anderson/Ayers Residence, *Nicasio, Calif.* *by Lisa Findley** *Fernau & Hartman*

208 Kew House, *Melbourne, Australia* *by Annemarie Kiely** *Sean Godsell Architects*

216 Tennis House, *Litchfield County, Conn.* *by William Weathersby, Jr.** *Gray Organschi*

222 Gordon House, *Lakeville, Conn.* *by William Weathersby, Jr.** *Gordon & Gordon*

229 Residential Products

Products

233 Metal Cladding

237 Product Briefs

248 Product Literature

7 What's happening at architecturalrecord.com

254 Dates/Events*

259 Record Houses call for entries*

266 AIA/CES Self-Report Form*

268 Reader Service*

270 Manufacturers' Spotlight

276 Classified Advertising*

WWW *** You can find these on our Web site at www.architecturalrecord.com, your source for more information on projects, a special Business Week/Architectural Record Awards section featuring finalists as well as winners, and more.**

The AIA/ARCHITECTURAL RECORD continuing-education opportunities are "Creating Sleek Metal Skins for Buildings" [page 173]; "Infloor Wire & Cable Management," sponsored by The Wiremold Company [page 188]; and "Site/Roadway Optical Systems Design and Application Guide," sponsored by Kim Lighting [page 192A].

Cover: *Headquarters for Het Oosten, Amsterdam, Steven Holl Architects Photograph by Paul Warchol*

Above: *BW/AR award winning project, Valeo Technical Center, Auburn Hills, Mich. Photograph by Paul Warchol*


IMPRESSIVE.
{ moon dust
COLOR: #58
AVONITE
Innovations in solid surfacing.
1-800-428-6648 / www.avonite.
CIRCLE 3 ON INQUIRY CARD

Go to

WWW.architecturalrecord.com

news

projects

features
digital architect
green architect
business week/ architectural record awards
interviews

dialogue
editorial
from the field
letters

virtual architect
record houses

continuing education

recruitment

advertisers/ products

professional directories

about record
index
subscribe
advertise
shop record
submit an article
editorial calendar
email policy
privacy policy
contact us

events

site map

home

Mark your calendars....

Mondays: *Architectural Record* ARCHives

Oct. 2 - October 1949 - a look back at the original PSFS Building project

Oct. 9 - June 1923 - the intriguing essay and images about architect Henry Bacon's, Lincoln Memorial

Oct. 16 - Flash back to December 1916 - architect and engineer, Robert Mills' Baltimore Washington Monument



Wednesdays: New 'Green' features in Green Architect

Oct. 4 - LA Utilities is offering a credit for the use of photovoltaic power

Oct. 11 - DOE is beginning a program dedicated to improving 'greenness' of commercial buildings

Fridays: Architectural Book & Media Reviews

Oct. 6 - Book Review: *Louis I. Kahn: Unbuilt Masterworks*

Oct. 13 - TV Review: ABC's *Madigan Men*, starring Gabriel Byrne as a New York architect

Daily News

Get the latest scoops from the world of architecture.

From The Field

Tune in regularly for the latest buzz from *Record* editors.

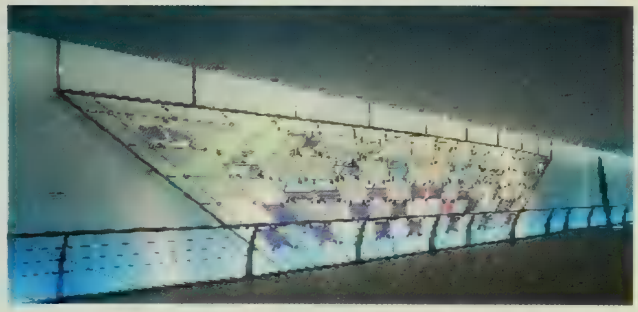
Interviews



Exclusive interview with Cesar Pelli on skyscapers and building in Hong Kong. A stimulating, new interview with **Brendan MacFarlane,** architect for Georges Restaurant, plus others.

sponsored by revit

2000 Business Week Architectural Record Awards



Who were the runners-up in addition to the winners? The annual Business Week Architectural Record Awards honor achievement of owners' objectives through design and collaboration with architects. See photos and details of both the winners and finalists.

sponsored by HermanMiller BENTLEY MILLIKEN

Projects

Find links to people and products involved in October projects: Library BTS, Residential, Project Portfolio, renovation of PSFS Building into Loews Hotel.

sponsored by buzzsaw.com

Earn CES Credits Online

Read *Record's* **building science** features/continuing education self-study courses and **file online for CES credits.**

Green Architect

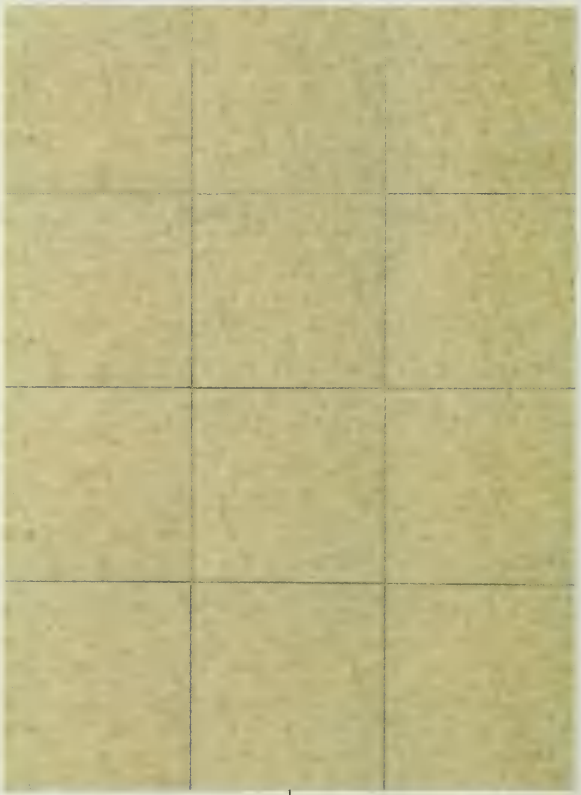
Find web-only 'Green' product reviews, links to manufacturers and weekly features on green projects and issues. **New weekly 'Green' features every Wednesday.**

Digital Architect

Connect to related high tech resources through web-only IT Vendor Guides and software reviews with links to manufacturer web sites. Find current and past coverage. This month: **The International Alliance for Interoperability.**

sponsored by autodesk

Natural instincts



Marlite Modules™ Naturally Inspired

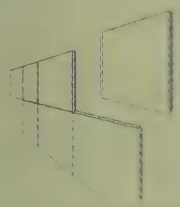


The most subtle hint of texture. The softest tones from nature's palette. An element of environmental interest and intrigue. It speaks to us. And it becomes part of us.

CIRCLE 4 ON INQUIRY CARD



Marlite Modules™ are 2' square panels, designed to represent the custom look of millwork without the high cost. The panels, featuring the exclusive Marlite finish, are available in a variety of naturally inspired woodgrains and contemporary patterns. Contact us today to learn more about how Marlite Modules could help inspire you.



Installed with adhesive.
Modified tongue and groove joinery
hides unsightly joint lines.

Marlite
(330) 343-6621 Fax: (330) 343-7296
www.marlite.com e-mail: info@marlite.com

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Robert Ivy, FAIA
MANAGING EDITOR	Ingrid Whitehead
DESIGN DIRECTOR	Anna Egger-Schlesinger
SENIOR EDITORS	Charles Linn, AIA Clifford Pearson Wendy Talarico Sarah Amelar
NEWS EDITOR	John E. Czarnecki, Assoc. AIA
PRODUCTS EDITOR	Rita F. Catinella
COPY EDITORS	Elizabeth Kugler, Lisa Rosman
WEB CONTENT EDITOR	Kevin Lerner
ASSOCIATE ART DIRECTOR	Kristofer E. Rabasca
ASSISTANT ART DIRECTOR	Clara Huang
PRODUCTION COORDINATOR	Juan Ramos
EDITOR AT LARGE	James S. Russell, AIA
SPECIAL CORRESPONDENT	Suzanne Stephens
ILLUSTRATORS	Muriel Cuttrell, Kira Eng, I-Ni Chen
CONTRIBUTING EDITORS	Robert Campbell, FAIA, Andrea Oppenheimer Dean, David Dillon, Lisa Findley, Blair Kamin, Elizabeth Harrison Kubany, Jerry Laiserin, FAIA, Nancy Levinson, Lee Mitgang, Robert Murray, Sheri Olson, AIA, Nancy Solomon, AIA, Michael Sorkin, Tom Vonier, AIA, William Weathersby, Jr.
INTERNATIONAL CORRESPONDENTS	David Cohn, Claire Downey, Tracy Metz, Naomi R. Pollock, AIA
SPECIAL PROJECTS	Charles Pinyan, Paul Herrmannsfeldt
RESEARCH DIRECTOR	John Conkling
DIRECTOR OF PROMOTION	Deborah Smikle-Davis
FINANCE	Michael Florek, Shlomo Messinger
CIRCULATION	Maurice Persiani, Brian McGann
ADVERTISING PRODUCTION MANAGER	Stephen R. Weiss
ADVERTISING DIRECTOR	David Johnson
VICE PRESIDENT/PUBLISHER	Elaine Shusterman

EDITORIAL OFFICES: 212/904-2594 Editorial fax: 212/904-4256 E-mail: *rivy@mcgraw-hill.com.*
Two Penn Plaza, New York, N.Y. 10121-2298
WEB SITE: www.architecturalrecord.com
SUBSCRIBER SERVICE: 888/867-6395 (U.S. only). 609/426-7046 (outside the U.S.). Subscriber fax: 609/426-7087.
E-mail: *p64ords@mcgraw-hill.com.* AIA members must contact the AIA for address changes on their subscriptions.
800/242-3837. E-mail: members@aia.org.
INQUIRIES AND SUBMISSIONS: Letters, R. Ivy, *rivy@mcgraw-hill.com*; Lighting, C. Linn, *linnc@mcgraw-hill.com*; Books, C. Pearson, *pearsonc@mcgraw-hill.com*; Record Houses and Interiors, S. Amelar, *sarah_amelar@mcgraw-hill.com;* Practice, E. Kubany, *elizabeth_kubany@mcgraw-hill.com*; Products, R. Catinella, *rita_catinella@mcgraw-hill.com;* News, J. Czarnecki, *john_czarnecki@mcgraw-hill.com;* Web Editorial, K. Lerner, *kevin_lerner@mcgraw-hill.com*

SUBSCRIPTION: Rates are as follows: U.S. and Possessions $59; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $8; for foreign $10. Subscriber Services: 888/867-6395(U.S. only); 609/426-7046 (outside the U.S.); fax: 609/426-7087.
SUBMISSIONS: Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage.
SUBSCRIPTION LIST USAGE: Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, N.J. 08520.
OFFICERS OF THE MCGRAW-HILL COMPANIES: *Chairman, President and Chief Executive Officer:* Harold McGraw III. *Executive Vice President and Chief Financial Officer:* Robert J. Bahash. *Executive Vice President, Organizational Effectiveness:* Barbara B. Maddock. *Executive Vice President, Global Markets:* John D. Negroponte. *Senior Vice President and General Counsel:* Kenneth M. Vittor. *Senior Vice President, Corporate Affairs, and Assistant to the President and CEO:* Glenn S. Goldberg. *Principal Operating Executives:* Leo C. O'Neal, *President, Standard & Poors;* Vasant Prabhu, *President, Information and Media Services;* Robert E. Evanson, *President, Educational and Professional Publishing Group.*
MCGRAW-HILL CONSTRUCTION INFORMATION GROUP: Norbert W. Young, Jr., FAIA, *President*

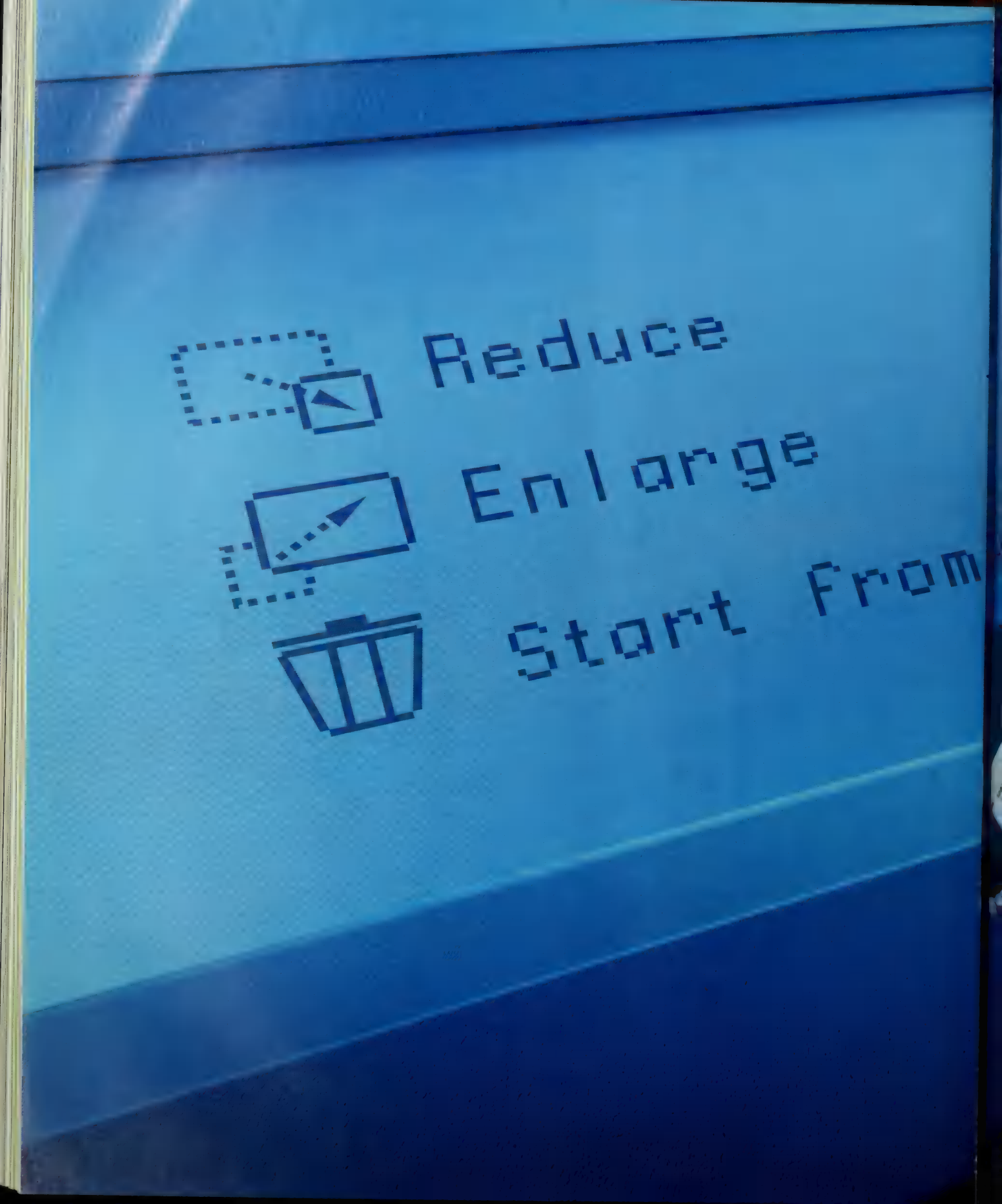
COPYRIGHT AND REPRINTING: Title ® reg. in U.S. Patent Office. Copyright © 2000 by The McGraw-Hill Companies. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, Mass. 01923. To photocopy any article herein for personal or internal reference use only for the base fee of $1.80 per copy of the article plus ten cents per page, send payment to CCC, ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, N.Y. 10121-2298; fax 212/904-4256. For reprints call 609/426-5129 or fax 609/426-7087. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because the possibility of human or mechanical error by our sources, The McGraw-Hill Companies or ARCHITECTURAL RECORD does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions therein or for the results to be obtained from the use of such information of for any damages resulting therefrom.

PRINTED IN USA

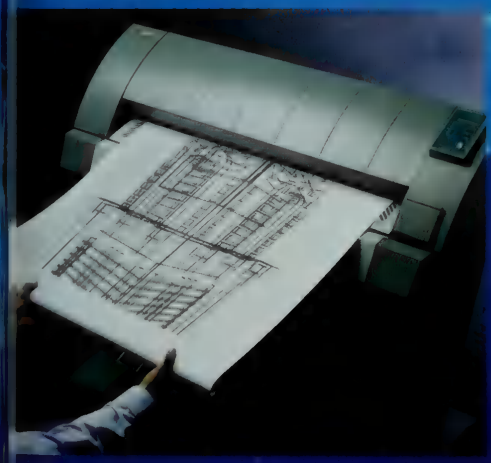
Architectural Record
McGraw-Hill Construction Information Group
A Division of The McGraw-Hill Companies

ABC MPA

THE AMERICAN INSTITUTE OF ARCHITECTS 2000 BOARD OF DIRECTORS • OFFICERS: *President:* Ronald L. Skaggs, FAIA; *First Vice President* John D. Anderson, FAIA; *Vice Presidents:* Linda Searl, FAIA, Gordon H. Chong, FAIA, J. Richard Kremer, AIA; *Secretary:* Stephan Castellanos, FAIA; *Treasurer* Harry Rutledge, AIA, RIBA • **REGIONAL DIRECTORS:** Roy Abernathy, Assoc. AIA, Jerry E. Abramson, Harold L. Adams, FAIA, RIBA, IIA, John Reid Benson, AIA, Bruce E. Blackmer, AIA, Derek Bradford, AIA, RIBA, ASLA, Timothy G. Cahill, AIA, Stephan Castellanos, AIA, Lugean L. Chilcote, FAIA, Donald M. Comstock, AIA, John F. Corkill Jr., AIA, Ben R. Darmer, FAIA, Richard Farson, Ph.D., Thomas G. Fernandez, AIA, Richard L. Ford Jr., AIA, John P. Franzen, AIA, James Gatsch, AIA, Holly K. Gerberding, AIA, Eugene Hopkins, FAIA, Timothy D. Kent, CAE, Edward Kodet Jr., FAIA, Lawrence R. Livergood, AIA, Kenneth Maynard, FAIA, David Messersmith, FAIA, Melissa Mileff, Barbara A. Nadel, FAIA, Robert L. Newsom III, FAIA, Thompson E. Penney, FAIA, Michael L. Prifti, AIA, Angel C. Saqui, FAIA, Larry M. Schneider, AIA, Katherine J. Schwennsen, AIA, Wayne D. Silberschlag, AIA, Bill D. Smith, FAIA, Marvin J. Sparn, FAIA, Douglas L. Steidl, FAIA, Ward Whitwam, AIA, David L. Woolev, AIA, Steven Winkel, FAIA; *CACE Representative:* Timothy D. Kent, CAE; *AIAS Representative:* Melissa Mileff • **AIA MANAGEMENT COUNCIL:** Norman L. Koonce, FAIA, *Executive Vice President/CEO;* Jim Dinegar, *COO;* Richard J. James,*CFO;* Chuck Hamlin, *Managing Director, AIA Communications;* Brenda Henderson, *Managing Director, AIA Component Relations;* Dale R. Ellickson, FAIA, *Managing Director, AIA Contract Documents;* Lisa Blackwell, *Managing Director, AIA Government Affairs;* Laura Eide, *Managing Director, AIA Human Resources;* Kimberly Allen, *Managing Director, AIA Knowledge Center;* Kenna Wood, *Managing Director, AIA Marketing and Research;* John Gaillard, *Managing Director, AIA Meetings and Events;* Nancy Somerville, Hon. AIA, *Managing Director, AIA Membership Systems;* Michael Copp, *Managing Director, AIA Professional Practice;* Helene Combs Dreiling, FAIA, *Managing Director, AIA Stakeholder Relations;* Philip D. O'Neal, *Managing Director, AIA Technology*


Reduce
Enlarge
Start From





Print changes almost as fast as your client can make them.

You've got a 20-story building and the client just made 25 changes. Enter Kinko's A to E prints. They're available in a variety of paper stock, including bond and vellum, and output at up to 300 DPI quickly and easily by top-of-the-line printers. They can be printed while you wait, or picked up and delivered within 24 hours. So you can get back to doing what you do best: designing, redesigning and designing again.

PRINT FROM DISK

DIGITAL PRINTING

COMPUTER WORKSTATIONS

ELECTRONIC FILE SUBMISSION

MOUNTING

LAMINATING

BINDING

MANUALS & REPORTS

PRESENTATIONS

HIGH-VOLUME COPIES

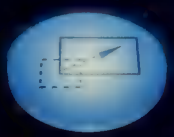
FLYERS & BROCHURES

HIGH-SPEED INTERNET ACCESS

SHIPPING SERVICES

PICKUP & DELIVERY

FULL- & SELF-SERVE



LARGE FORMAT PRINTING

kinko's

www.kinkos.com Open 24 hours

CIRCLE 5 ON INQUIRY CARD

Products and services vary by location. All marks appearing are proprietary marks of Kinko's Ventures, Inc. and are used by permission. Kinko's logo is written permission from the copyright holder in order to reproduce any copyrighted work. ©2000 Kinko's, Inc. All rights reserved.

Always sign your work.





It's your legacy. Define it with boundless colors, shapes and styles. Let us help you transform light into emotion. Shadow into s

©2000 Weather Shield Mfg., Inc.



Weather Shield
Windows & Doors

CIRCLE 6 ON INQUIRY CARD

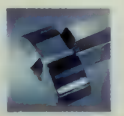
lter into inspiration. Our windows and doors. Your mark. Call 1-800-477-6808 x 2342 or visit us at weathershield.com See the light.™

DORMA

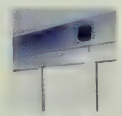
You put your heart and soul into designing a building. It's not merely a structure. It's a piece of you. No matter who owns it, no matter what it's called, it will always be your building. We know. For more than 90 years, DORMA has helped architects create grand entrances and safe exits by marrying aesthetics and functionality. The entranceway at the World Trade Center is a shining example. As are thousands of prestigious buildings throughout the world. We lead the world in door technology. So if you want to make a great impression, insist on DORMA. After all, architectural marvels are not built on compromises. To see more of DORMA products, call us or visit our web site. Or simply walk into the World Trade Center.



You don't just spec a door. You put your signature on it.



DORMA Architectural Hardware
800-523-8483



DORMA Automatics
877-367-6211



DORMA Glas
800-451-0649



Crane Revolving Doors
800-942-7263

www.dorma-usa.com

©2000 DORMA Group North America. All rights reserved.
DORMA is a registered trademark of DORMA Properties, inc.

CIRCLE 7 ON INQUIRY CARD



LOOKS ARE STILL EVERYTHING.

STARPHIRE® GLASS: A CLEARLY BEAUTIFUL CHOICE.

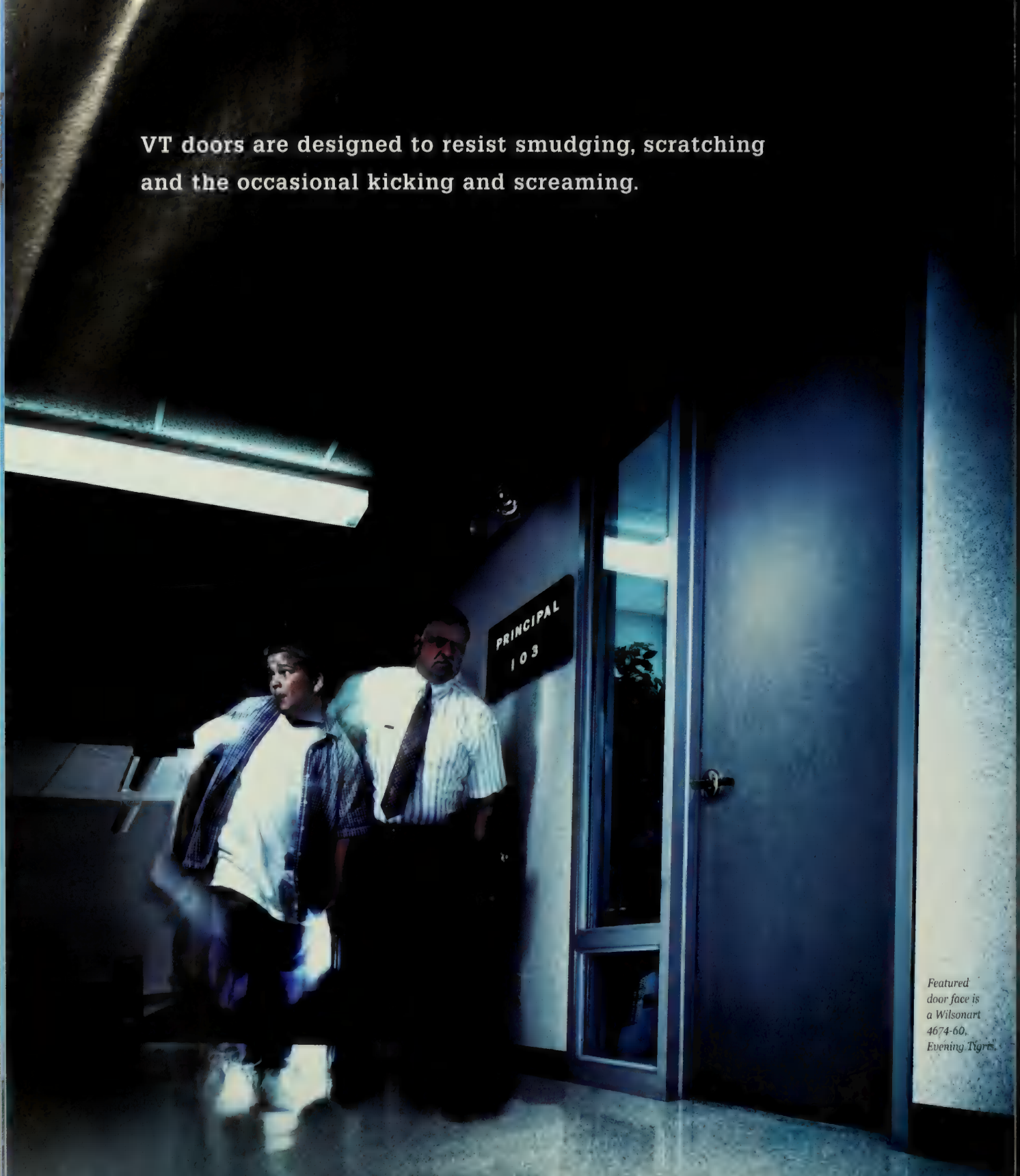
A building is more than a shelter. It's the expression of your idea in steel, stone and glass. And if yours is a truly brilliant idea, then it deserves the clearer-than-clear, jewel-like brilliance of Starphire® ultra-clear glass.

Without a hint of tint, there is simply no other glass like it in the world. It transmits 91% of the visible light with super-high fidelity color transmission that lets the true beauty of the outdoors, the sky – the light – become part of the design. Starphire® ultra-clear glass also can enhance your vision, spandrel, entrance or interior glass applications.

Starphire® ultra-clear glass is just another example of how PPG Architectural Glass uses technology to give you the freedom to create and inspire. Because when it's all said and done, looks are still everything.


To see why Starphire® ultra-clear glass makes ordinary glass green with envy, call the PPG Solutions Hotline today for your Starphire® ultra-clear glass design kit or a glass sample. 1-800-377-5267.
PPG
Glass Technology
SINCE 1883
www.ppgglass.com
CIRCLE 8 ON INQUIRY CARD

VT doors are designed to resist smudging, scratching and the occasional kicking and screaming.

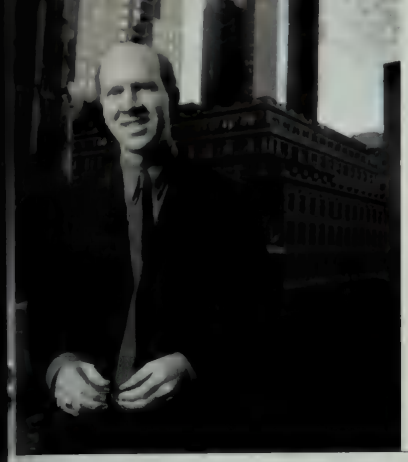


Featured door face is a Wilsonart 4674-60, Evening Tigre.

Stylish. Reliable. And so incredibly durable, it's difficult to determine who's more indestructible. The steel doors or the competition. VT decorative laminate and wood veneer doors. To learn more, call 1-800-827-1615 or visit www.vtindustries.com.

VT INDUSTRIES Architectural Wood Doors

CIRCLE 9 ON INQUIRY CARD



Keep off the grass

Editorial

By Robert Ivy, FAIA

The Mall speaks. Day after day, workers and tourists in Washington, D.C., are drawn out from the offices and great museums to hear its silent language. Its voice is broad, of superb scale and timbre, a shaft of light and air, grass and gravel and trees at the core of the nation's consciousness, stretching on axis from the Capitol to the country like a balanced vector, a place to luxuriate in the American idea, to gather and celebrate or protest. In a flash, when the National Capital Planning Commission approved the World War II Memorial on September 21, The Mall shrank.

It's too late, you argue: the memorial is proceeding toward a November 11 groundbreaking, and throughout its tortuous progression, a roster of leading architects, critics, and other citizens have reviewed and approved the plans devised by Rhode Island architect Friedrich St. Florian. The GSA followed the rules, evaluating over 400 preliminary designs and employing a respected competition adviser; the Fine Arts Commission, headed by J. Carter Brown, approved the plans, as did the Interior Secretary. Yet the location and the design continue to stir heated debate by critics and veterans alike, including many architects. At least two groups threaten to go to court to overturn the approval process.

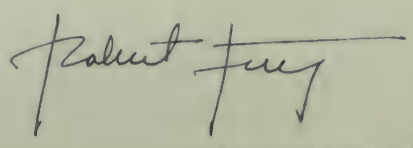
Most critics decry the memorial's location, despite the argument that World War II deserves such axial prominence: George Washington's pylon represents the 18th century; Lincoln's memorial, the 19th. Where else should any artifact suggestive of epic struggle, arguably the seminal event of the 20th century, go? Despite the sum of all the good reasons to place this memorial at the Rainbow Pool, however, nothing alters this poignant fact—the Mall will suffer from it.

Part of the genius of L'Enfant's plan, and the McMillan Commission's subsequent elaboration, rests in open parkland proceeding out toward the Potomac from the legislative chambers, but not in human intervention. This tapis vert is a place for ideas to soar, not lodge. Unless the memorial rises to a heroic level, it will only detract from the ensemble of earth and sky.

Sadly, it does not. Despite the fact that an earlier St. Florian design faced a judgmental firestorm and was subsequently modified, the final resolution lies somewhere east of classicism and short of poetry. Fifty-six pillars bearing wreaths, representing the states and territories, and two arched pavilions, representing the Atlantic and Pacific theaters, bracket the Pool. A wall carries 4,000 gold stars, emblematic of 400,000 Americans who gave their lives.

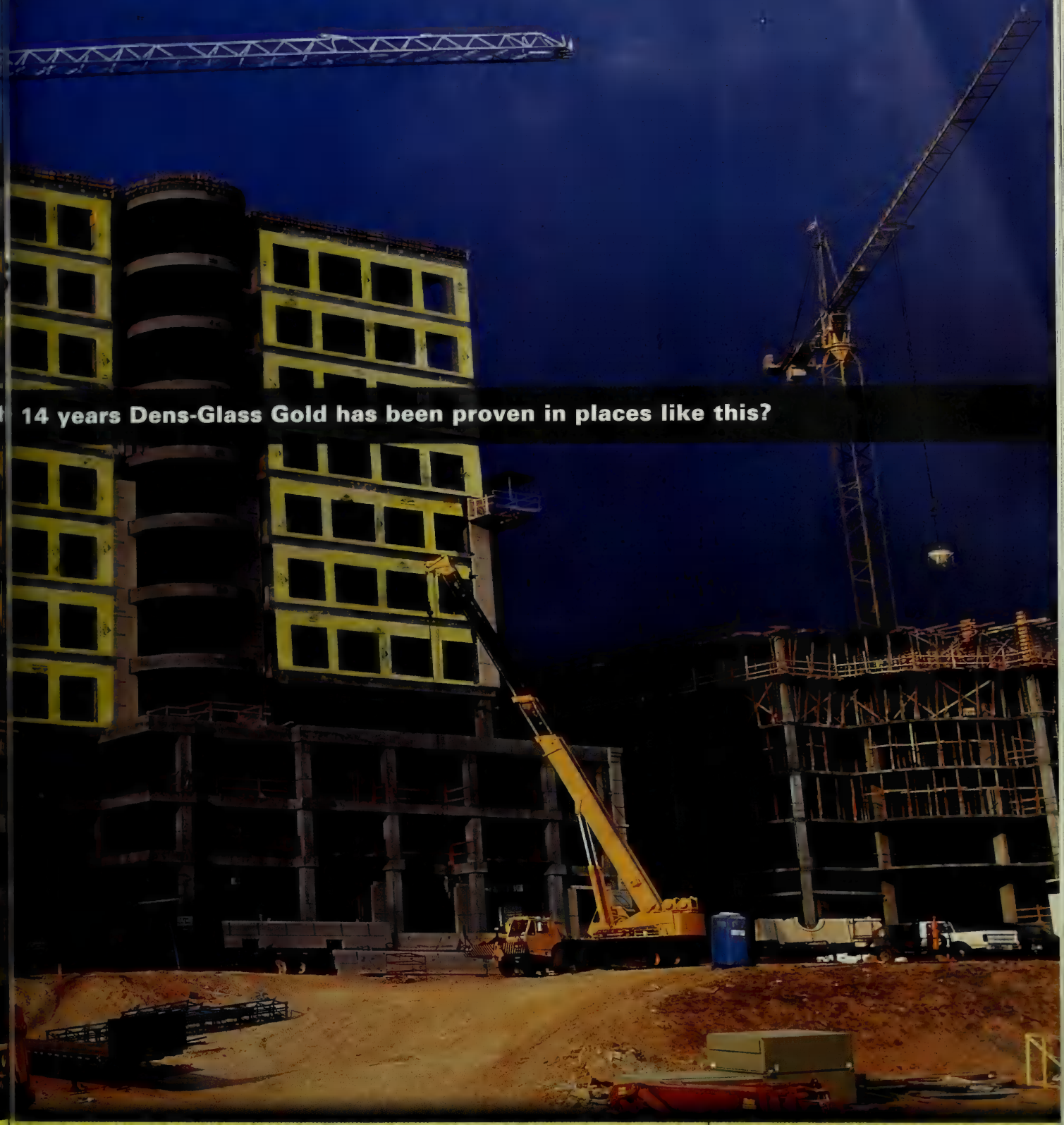
Hieratic, elliptical, polite, this unimaginative display will not draw tears or stir the human heart. It seems devoid of that allusive power we have witnessed at successful sites—Maya Lin's Vietnam Memorial, James Ingo Freed's Holocaust Museum, or Stanley Saitowitz's Holocaust Memorial in Boston. Instead, it looks timid and vacuous to 21st-century eyes and strangely out of joint with the times. World War II deserves both more power and art and less politesse. The courageous sacrifice of an entire generation demands transcendent architecture, work that will stir the imagination and move future generations to ponder the legacy they enjoy. Instead of committee-rigged, neoclassical order, they deserve arresting imagery, a blinding light, or a cavern with the power to force them to stop and wonder.

It may be too late to change this politically charged plan. The money has been raised and every formal hurdle has been cleared, save for the Interior Secretary's building permit. Until the concrete is poured and the stones are dressed, however, this argument stands, more powerfully than any single memorial. It is the voice of the Mall itself, repeating and redefining the entreaty of an earlier generation of patriots: Don't Tread on Me.





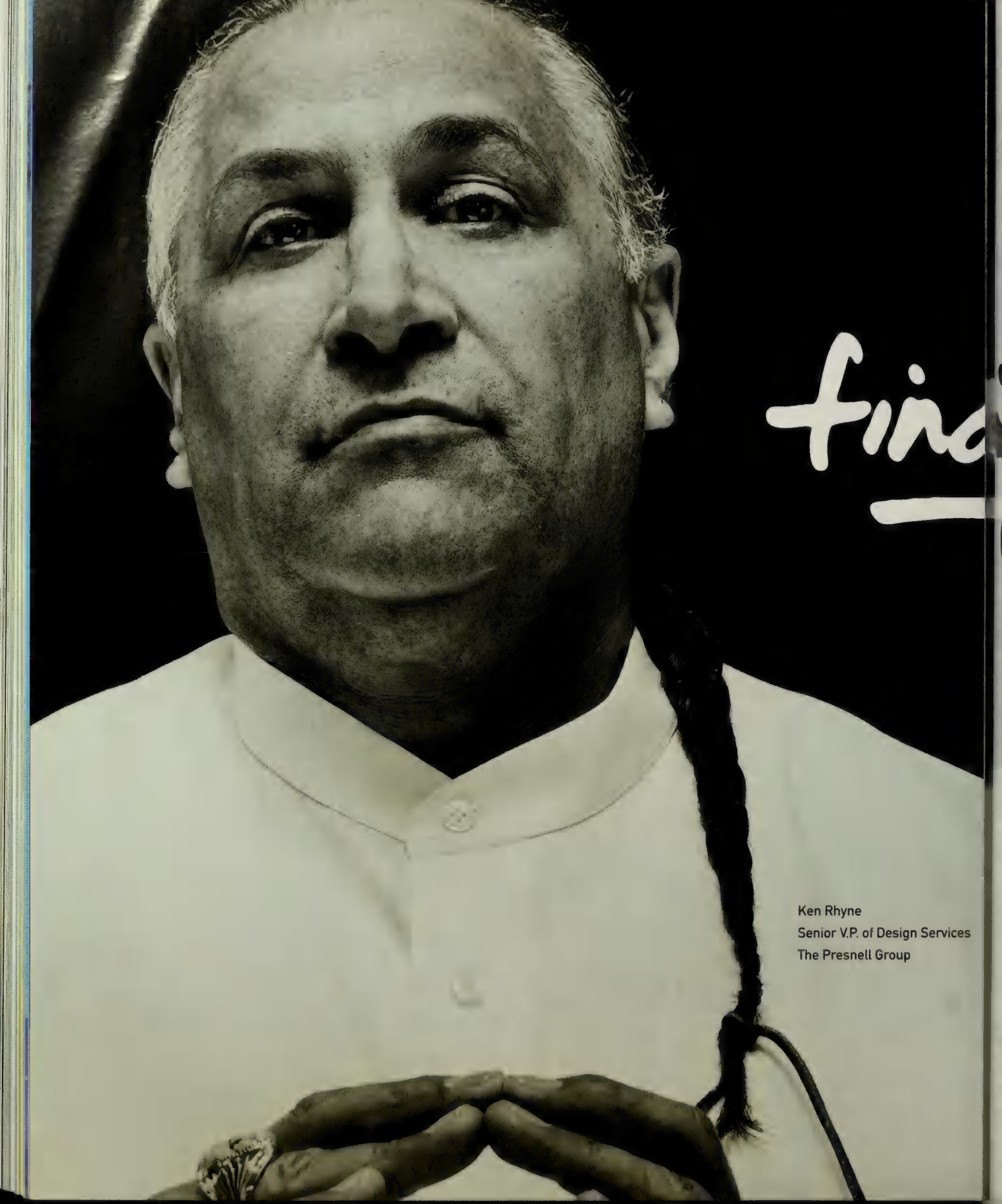
With Dens-Glass® Gold, there's absolutely no reason to risk your reputation on any other exterior sheathing product. Simply put, Dens-Glass Gold, fro
G-P Gypsum Corporation, is superior in every way. It has a 10-year substrate warranty provided on commercial EIFS projects, it's non-combustib
and ASTM 136 compliant. And not only has Dens-Glass Gold maintained optimum performance for over 14 years, it's been proven 99.999% defect fr



Of course there's also the fact that Dens-Glass Gold is lightweight and easy to cut with a utility knife. So next time you find yourself wondering which exterior sheathing product would best suit your needs, think about the options. Then think Dens-Glass Gold. Proven. Reliable. And simply superior.

GP
Georgia-Pacific

CIRCLE 10 ON INQUIRY CARD



Ken Rhyne
Senior V.P. of Design Services
The Presnell Group

Everything in life forms a circle.

One of the biggest challenges is

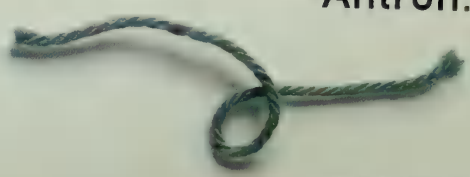
ig your place.

therein lies your calling, your balance,

your power - Ken Rhyne

DUPONT

Antron® Innovate.



CIRCLE 11 ON INQUIRY CARD

Learn more about Ken Rhyne and DuPont Antron® nylon, the carpet fiber that delivers the ideal balance of aesthetics, performance and sustainability, at www.dupontcommercial.com

Antron® is a DuPont registered trademark for its brand of nylon carpet fiber. Only DuPont makes Antron. © 2000 DuPont

Letters

Memories of two great men

I was saddened to learn of the death of John Hejduk [News, AUGUST 2000, page 32] and felt compelled to write about my personal experience with him.

While attending the University of Houston in the 1970s, I was in a program that exposed me to well-known architects, most of whom were educators. John Hejduk was one of those architects. My classmates and I had the extreme pleasure of getting to know Mr. Hejduk personally. We experienced the power of his personality, charm, and great talent as an educator and communicator.

For an intense week, we worked night and day on a project, which Mr. Hejduk had previously sent program requirements for. He was in our studio a good portion of that time and gave us his undivided attention. Over 20 years later, I still have the results of that project.

Although we are saddened by his passing, we should also be glad, and thankful, for John Hejduk's gift to all of us.

—Harry Harris
Franklin, Tenn.

The shocking news of Enric Miralles' death reached us in India through the August issue [News, page 32]. Aged a mere 45, he had only just begun to make his indelible mark on us all.

Miralles proved through his short span of creativity that architecture is a curious craft. He showed how a structure may follow all of the laws of design yet be worthless, while still another may break all of the principles and be profound. Miralles proved that a building may be bad without doing anything bad, while again another work may have to sin against art to reach perfection.

Enric Miralles, we will miss you; your generosity, your energy, and most of all your inspiration.

—Christopher Benninger, AIA
Pune, India

The middle of somewhere

The article about St. John Vianney Catholic Church in Baton Rouge, La. [AUGUST 2000, page 112] could use a few lessons in both civility and history.

The article begins with describing the location of the church as "a world o' Wal Marts, McDonald's, and strip malls . . . an unlikely location for high architectural drama." Obviously, the context of a building is an important influence on any building's design, and some idea of the location of the building is in order. However, there is no reason to be so snidely insulting about a location that is home to a community of people who care enough to contribute the huge amounts of time and money to create any community building, much less such a beautiful church. Perhaps the suburban context is not as architecturally refined as it could be—but change will never be achieved with insults.

Also, anyone familiar with Catholic Church architecture since 1967 would be surprised NOT to find a new church that was octagonal, round, square, elliptical, or in some other form that implies or abstracts the concept of a gathering around a table. Very few long, narrow, "traditional" churches have been built since the Church's Vatican II council in 1967. In fact, these "liturgical reforms of the 1960s" are even mentioned in the article.

The building itself is fantastic, and I hope that it helps the parishioners of St. John Vianney, or the residents of "nowhere," as the article would have it, to strengthen and grow in their relationship with God—which is the whole point.

—Jim Grafton
Everett, Wash.

Of a certain age

Although I was impressed by the St. Jean Vianney Catholic Church by Trahan Architects in your August issue, the article was spoiled by Mr. Trahan's tasteless remark about hiring only new graduates. His reason was "To avoid the disenchantment that seemed inevitable with middle age." He further says that new graduates "make up in enthusiasm what they lack in experience, and they're more design-oriented." ARCHITECTURAL RECORD's decision to include discriminatory comments is inappropriate in a high-profile magazine.

—Sanford Bender, AIA
Philadelphia

Not just plain Manila

I was both delighted and surprised that you spoke of Manila as an example of 21st-century Asia [Editorial, APRIL 2000, page 17].

The Philippines truly has so much potential, if only we could stop the "corruption that taints the air like overripe fruit." Imagine the exposé made by a local TV station about a subdivision development in a Manila suburb half owned by President Estrada and his family. There is no building permit, no environmental clearance certificate, no license to sell from the Housing and Land Use Regulatory Board, and construction is halfway done. It is almost certain that nobody else will get in his way.

The government maintains that our country didn't really crash in the Asian crisis. True, because of so much corruption, we never even took off the runway. Manila does work hard, and I believe we deserve better!

—Jaime W. Hermogenes
Sampaloc, Manila, Philippines

Thoughtful remarks

Some thoughts on the articles on Gehry's EMP and Polshek's portfolio [AUGUST, pages 126 and 88].

One of the particularly enjoyable aspects of media coverage in relation to art and architecture is, of course, the degree to which disparate stylistic and ideological approaches are brought together under one cover.

Certainly Gehry's and Polshek's work could not be more different. Yet what is most telling about the nature of media coverage and the state of the architectural profession today are the similarities in how these projects get produced.

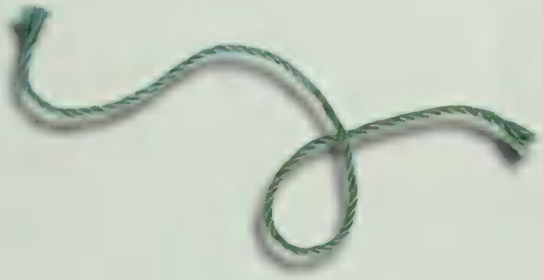
First of all, to paraphrase Mr. Polshek, a Saturn rocket is designed and developed by thousands of technicians, while with architecture there remains "a single maker."

I have been practicing architecture myself for some 20 years now. I firmly believe, even in an office as "artistic" as Frank Gehry's, that there is no single maker to any built work of architecture. Herein is the link between Polshek's and Gehry's respective practices.

Frank Gehry's highly "baroque" (meaning "highly whimsical or grotesque"—*Oxford English Dictionary*) designs are built with the aid of dozens of young, talented, technically capable students of architecture, guided by more experienced architects, engineers, and computer technicians.

James Stuart Polshek's more conservative, and considerably less expensive, designs (though on the high end of architectural square-footage costs) are undeniably produced the same way.

More often than not, great ideas in architecture come from the young people employed by firms such as these. Most of the work is also produced by these younger people. The "old guys," as it were, are certainly the guides and the editors of these young designers, but it is outrageous to claim a single author for any architectural work.



Still takes your breath away, doesn't it?

The molecular structure. The cohesive chemistry. The blueness.

Of course, even more amazing than the fiber itself is what's being done with it.

From unimaginable new colors and styling to unheard-of performance and sustainability.

Please stay tuned for the next round of creations, interpretations and innovations coming out of your favorite mills.

Brought to you by DuPont Antron®, world leader in breathtaking string technology.

Until then, visit us regularly at www.dupontcommercial.com. And don't forget to breathe.

DUPONT

CIRCLE 12 ON INQUIRY CARD

Antron.® Innovate.

Antron® is a DuPont registered trademark for its brand of nylon carpet fiber. Only DuPont makes Antron®. © 2000 DuPont

Letters

What of the hundreds of contractors needed to build these creations?

I would argue that novels, paintings, even some sculptures, remain in the realm of the "solitary genius." Architecture never has been, nor will it ever be, the result of single vision.

—David Kesler
Via E-mail

Housing for all

Reading "In Holland, the Shock of the New," [JULY 2000, page 128], I was very affected to learn that this nation, where "almost everyone lives in well-designed dwellings with good light," is "in the midst of an enormous government-sponsored . . . effort to build a million new units of housing by 2010." As a New York architect who passes homeless people every day, I feel deeply angry and ashamed that our country—which has such vast wealth and resources, including so many architects capable of designing well-built, beautiful homes for all Americans—is doing so little to remedy this shameful, totally unnecessary situation.

I learned from Aesthetic Realism, the education founded by the great philosopher and critic Eli Siegel, that the one reason homelessness exists is because a person's need for a home is seen as a means for someone else to make a profit. This is contempt, which he defined as "the addition to self through the lessening of something else." In a series of lectures beginning in 1970, Mr. Siegel showed that economics based on contempt is so inefficient, it can no longer work. Today, despite all the fakery about how "booming" it is, an economy that cannot provide decent housing for all our citizens is an utter failure.

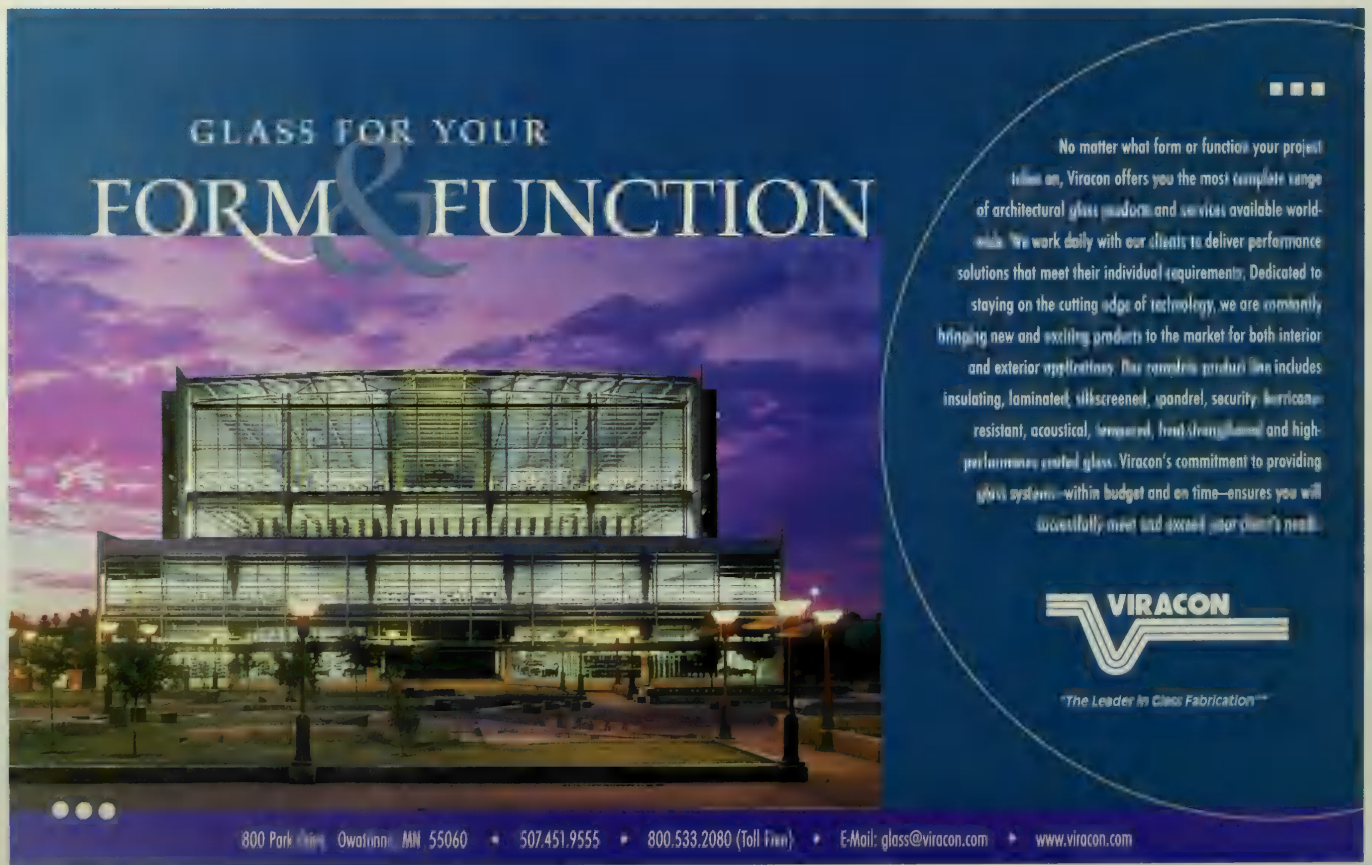
The housing crisis will end and we, as architects, will feel truly useful and proud when we, when government leaders—when all Americans—ask and honestly answer this kind, crucial question first asked by Mr. Siegel: "What does a person deserve by being alive?" This question was the basis of an important continuing-education seminar I was proud to moderate at this year's national AIA convention in Philadelphia, "Housing: A Basic Right, an Urgent Need, an Architectural Priority," now on the convention Web site, www.aiaconvention2000.com

—Dale Laurin, AIA
New York City

Corrections

The article on Lutèce restaurant [SEPTEMBER 2000, page 150] did not include the following credits: Lighting designer, Patrick Quigley & Assoc.; kitchen consultants, Vincent Longarbardi/Bob Finkelstein Assoc.; ADA code consultants, Pentacore. The August lighting section [page 199] incorrectly referred to the Ewing Marion Kauffman Foundation, whose mission is "to research and identify the unfulfilled needs of society and to develop, implement and/or fund breakthrough solutions that have a lasting impact and offer a choice and hope for the future." Find out more at www.emkf.org. Also in August [Seattle Library, page 120], engineer credits should have been as follows: Structural engineer, Skilling Ward Magnusson Barkshire; MEP engineer, Ove Arup; overall engineer, Ove Arup/Skilling Ward Magnusson Barkshire. In the August story on EMP [page 130], the "Waterproofing/Insulation" heading should have been followed by "Spray-on Foam Insulation." Waterproofing for EMP was supplied by American Hydrotech, Inc. In August's BTS story about the Science Center, credit for interior design should have gone to Carmen Nordsten Ingonda Design. The story on the Smith Campus Center [page 142] should have listed Wolff Lang Christopher Architects as associate architect. August products [page 224] should have listed the phone number for Barfly Beer Fridges as 416/364–8260.

Send letters to rivy@mcgraw-hill.com.



CIRCLE 13 ON INQUIRY CARD

Solitaire™







KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

CIRCLE 14 ON INQUIRY CARD

www.kimlighting.com





Washington Hall, center stage for theatre and cultural events at Notre Dam
Built in 1881, this modern Gothic structure was named by Father Sorin
himself, Notre Dame's founder, in honor of his great hero, George Washingto

You've got to be good to go into Notre Dame and leave with a victory.

When the University of Notre Dame decided to replace the windows in two of the more historic buildings on its storied campus, all the major manufacturers wanted the job. But as they learned more about the size and scope of the project, the list began to dwindle. Since both buildings are on the National Register of Historic Places, Notre Dame wanted windows with wood interiors that matched the appearance and profile of the originals. To minimize maintenance, another demand was aluminum clad exteriors. Marvin Windows and Doors emerged victorious. And designed and built 310 windows for the project, not one of which was a standard size. Not only that, but the casings were factory applied and a custom color for the exterior cladding was developed to replicate the 100 year-old originals. If you have a challenging commercial project, contact the company that has a reputation for winning the tough ones.



The wood interiors of Marvin's windows are virtually identical to those installed a century ago. For the exterior aluminum cladding, an appropriately-named custom color was created: Irish Bronze.



MARVIN Windows and Doors

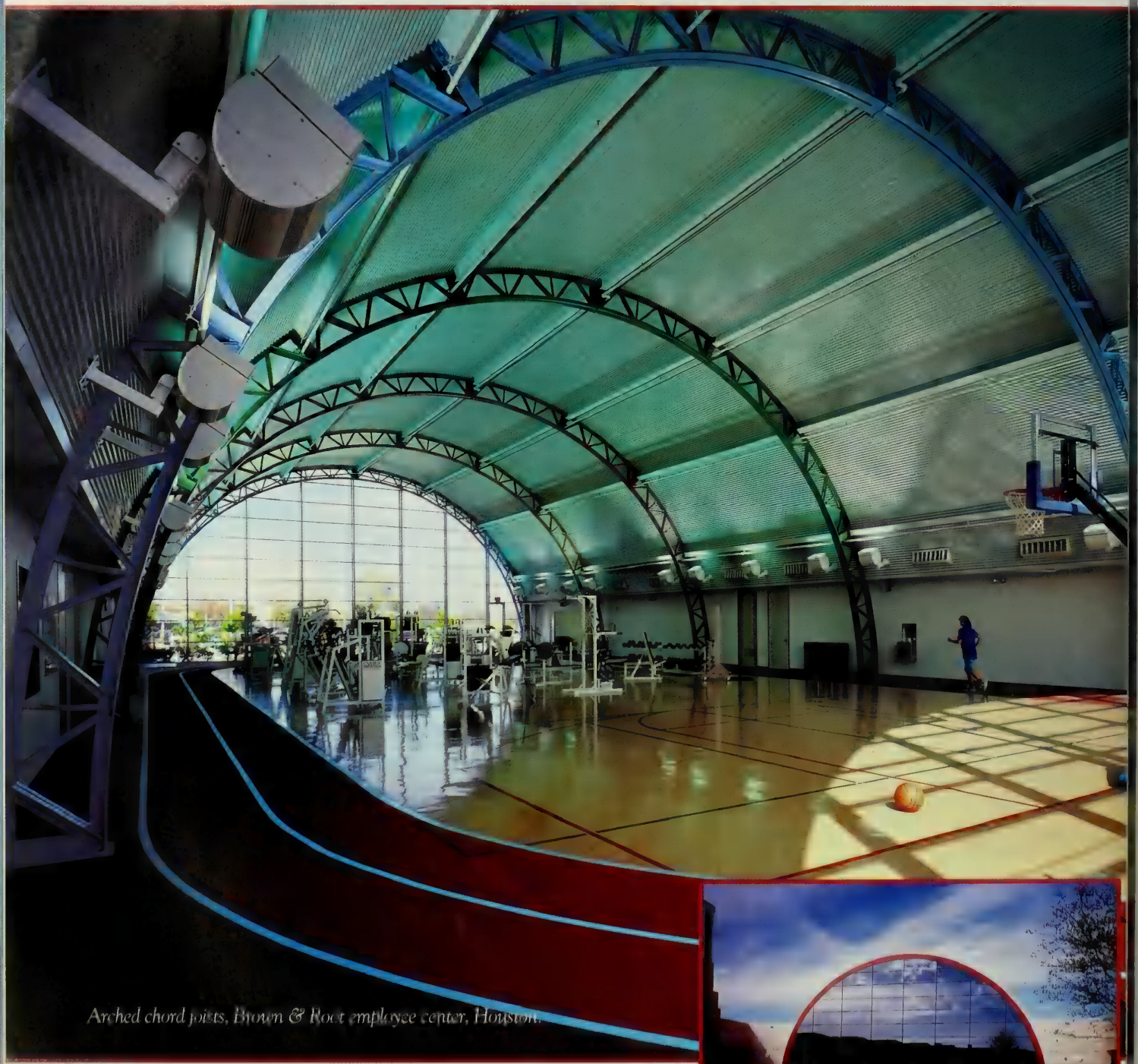
Made for you.

For a free catalog, call 1-800-236-9690. In Canada, 1-800-263-6161 www.marvin.com

1200010A

CIRCLE 15 ON INQUIRY CARD

SUPPORT CAN



Arched chord joists, Brown & Root employee center, Houston.

BE BEAUTIFUL.

It's not surprising that Brown & Root's employees think the exposed joists in their fitness center are an attractive part of the building's design. But it's a bit unusual when the accountants often comment that those steel joists are absolutely gorgeous. That's because those Vulcraft arched chord joists cost them half as much as the originally specified rolled I-beams would have cost. Half as much.

You see, Vulcraft is the largest supplier of steel joists in the country, including more than a dozen nonstandard designs, more than anyone in the industry. We've been making nonstandard joists for years and with our expertise as well as our large inventory of steel, we make them quickly and economically. What's more, the earlier we get involved in the design stages, the better for the project. Because our experienced engineers can assist the project's designers and bring the end product in more quickly and at less cost than could be done with traditional methods. Just like we did for one of the country's largest contractors, Brown & Root. And if we can do it for them, we can most certainly do it for you.

With Vulcraft nonstandard joists you expand your design possibilities with all the benefits of steel joist construction: they're lightweight and easy to erect like standard joists and can be delivered when you need them. Consider Vulcraft joists for your next project, no matter how large or small. Because our support comes in all sizes and styles, too. See Sweet's 05100/VUL or contact any of the plants below.

VULCRAFT
A Division of Nucor Corporation

PO Box 637, Brigham City, UT 84302 435/734-9433; PO Box 100520, Florence, SC 29501 803/662-0381; PO Box 169, Fort Payne, AL 35967 205/845-2460; PO Box 186, Grapeland, TX 75844 409/687-4665; PO Box 59, Norfolk, NE 68702-0059 402/644-8500; PO Box 1000, St Joe, IN 46785 219/337-1800 General Contractor: Brown & Root; Steel Fabricator: Palmer Steel Supplies, Inc.

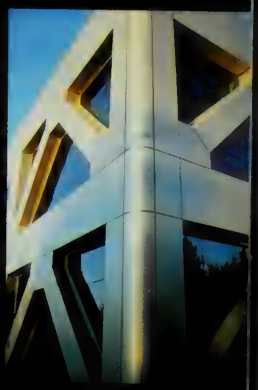
CIRCLE 16 ON INQUIRY CARD





A Panel Discussion

When you're talking design flexibility, contemporary appearance and affordability, you're talking Alucobond® Material.

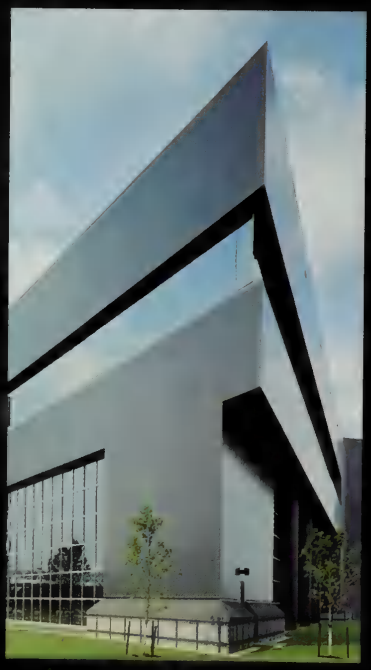


Created 30 years ago as the first-ever aluminum composite material or ACM, Alucobond Material has contributed to the design excellence of more than 50,000 buildings worldwide. Alucobond Material's success is due in part to its network of distributors/fabricators–clearly the best in the industry. These partners offer unequaled knowledge and expertise regarding all aspects of fabricating and installing aluminum composite material.

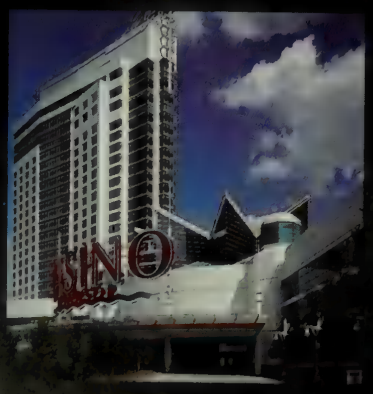
And that translates into unequaled benefits for you.

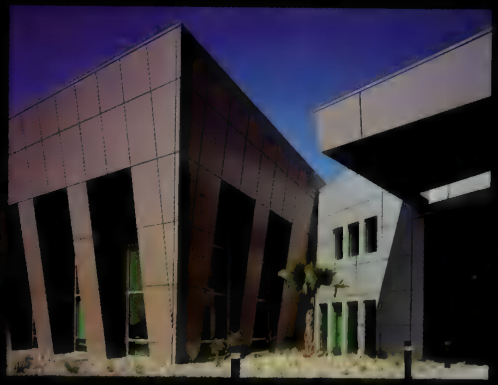
So consider Alucobond ALUCOBOND® MATERIAL Material for your next design challenge.

You'll experience the confidence that comes only with the best product and people in the industry.









alusuisse composites

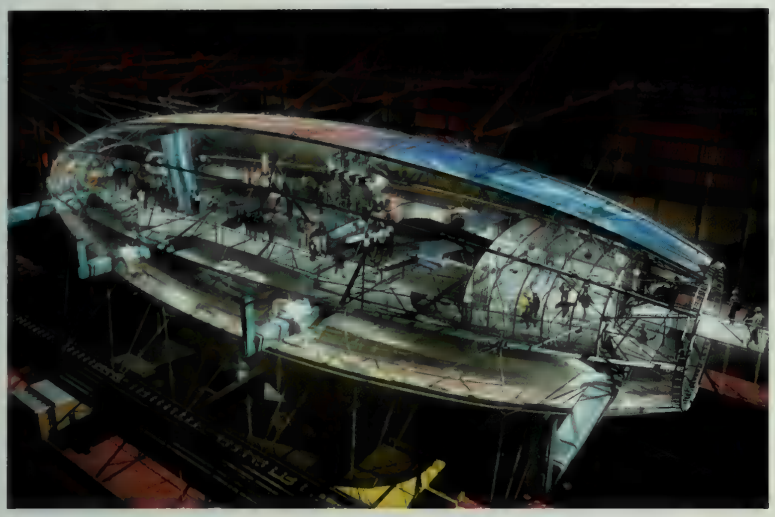
Alusuisse Composites, Inc.
P.O. Box 507 • 208 W. 5th Street • Benton, KY 42025•050
800-382-6445 • 270-527-4200 • Fax 270-527-1552
www.alusuisse-comp.com

CIRCLE 17 ON INQUIRY CARD

Record News

Highlights: Gore v. Bush p. 34
Saving Snyderman from demolition p. 38
NEA funds public works competitions p. 42
Four finalists for *NY Times* tower p. 44

Smelting never looked this good: A steel plant transformed



Steel smelting has never been this exciting, or eye-catching. The first major cultural project by the British firm Wilkinson Eyre Architects, the conversion of the former Magna steelworks in Rotherham, U.K., into an entertainment and educational center, will add verve to learning about the smelting process.

As the name Magna (Latin for great or large) implies, the project is vast in scale. It will transform what was one of Europe's longest smelting shops into a series of exhibition pavilions and spaces themed around the steel-production process. An exercise in refinement, the project will retain the power of the original volumes without creating a sense of void.

Rotherham, home of the $52.5 million Magna project, is a town of 250,000 in northern England's coal district.

Magna has procured a $28 million Millennium Commission grant funded by the United Kingdom's National Lottery. Like many projects receiving such support, Magna is intended to bolster the identity of an economically depressed region. This approach to regeneration has been criticized by those who believe it will turn Britain into one big Heritage Trail.

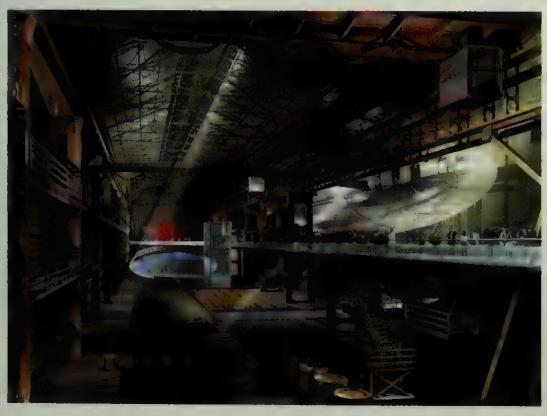
Another concern is that the increasing number of tourist attractions will fail to draw the crowds necessary to make them viable. Architecturally, though, Magna's design is promising.

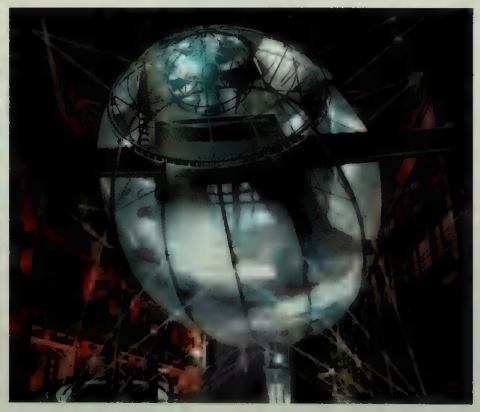
Wilkinson Eyre has created four pavilions within the two seven-story-tall, 385-yard-long main bays of the steelworks building. Each pavilion explores one of basic elements in steel forging: earth, air, fire, and water. Poetically, the pavilions are connected with one another and with the reused transformer building through walkways and bridges.

The most unusual of the four pavilions is the one devoted to air and housed in an airshiplike structure that hovers well above the ground level. The Air Pavilion attaches firmly to the transformer building with steel platforms that pierce translucent foil pillows.

Wilkinson Eyre has recently gained attention for several transportation and infrastructure projects in London, including the new Stratford Jubilee Line Station, Stratford Market Depot (a maintenance facility for London Underground's new Jubilee Line), and the South Quay Footbridge.
Laura Iloniemi

Inside Magna is the Air Pavilion (right), an airshiplike structure skewered by steel platforms.





HEADING FAR SOUTH

The AIA Firm Survey 2000–2002 reveals a sharp increase in U.S. firms doing projects in the Caribbean and Central and South America. The survey, sent to 4,500 AIA member-owned firms, was conducted in January and February 2000. The study was funded and conducted jointly by the AIA and the McGraw-Hill Companies Construction Information Group.

Percents of total international billings calculated by project location (*Multiple responses permitted*)

	1996	2000
Central America/ South America/ Caribbean	14%	28%
Asia/Pacific Rim	32%	26%
Western Europe	22%	19%
Canada	5%	15%
Eastern Europe	19%	13%
Middle East	11%	9%
Mexico	10%	7%
Africa	6%	2%
Subcontinent Asia	3%	2%

Source: AIA Firm Survey 2000–2002

OFF THE RECORD

Condé Nast employees are disparaging their Frank Gehry–designed cafeteria [JUNE 2000, page 116] at 4 Times Square. Not because of the design, mind you, but because it tempts the waiflike fashion editors with too many culinary delights. As an anonymous employee wrote to Inside.com, "While I first regarded the cafeteria with awe and affection, I now look upon it with something more akin to terror."

SHoP/Sharples Holden Pasquarelli has been awarded the commission to renovate and expand Prentis Hall at Columbia University into a new school for the arts. The job entails renovating 50,000 square feet of space and adding an additional 50,000 square feet. The new facility will consolidate a program that currently occupies space in 11 different buildings on campus.

Brad Cloepfil of Portland, Ore., Zaha Hadid of London, Morphosis of Santa Monica, Calif., and Ben van Berkel and Caroline Bos of Amsterdam have made the short list for a renovation and expansion of the Wadsworth Atheneum in Hartford, Conn. An architect will be chosen by mid-October.

NCARB has left the AIA building. As of September 25, NCARB has taken up new digs on K Street NW in Washington, D.C., and is now the only collateral organization outside the AIA building.

The distinctive, but empty, National Centre for Popular Music by Branson Coates in Sheffield, U.K., closed 16 months after opening. The $21 million museum attracted few visitors.

Taking a stand on the built environment

Election day, November 7, is less than a month away. Here's the low-down on where the presidential frontrunners stand on select issues of the built environment. *Jane Kolleeny and John E. Czarnecki, Assoc. AIA*





Where they stand:	Democrat Al Gore	Republican George W. Bush
School Construction 	Supports an expanded federal role in education, including school construction. Favors School Modernization and Qualified Zone Academy Bonds to help public school districts build and renovate more than 6,000 educational facilities in two years. Would use federal funds to triple the number of charter schools to 5,100 by 2010. Proposes grants for districts planning to build small high schools of fewer than 600 students.	Views school construction as a state and local responsibility but allows that "the federal government can play a role in providing schools innovative options to build and repair." Would offer $3 billion in loan guarantees to 2,000 charter schools in the next two years. For children of military and Native American families, proposes $310 million and $928 million, respectively, for school repair and construction.
Housing 	Would increase the Low-Income Housing Tax Credit, providing incentives for an additional 180,000 units of affordable housing in the next five years. Supports HUD's Home Investment Partnership and Community Development Block Grant programs. Supports the New Markets Initiative, which encourages private investment in traditionally underserved communities.	Encourages a larger role for state and local governments in controlling federally assisted housing in their jurisdictions. The Renewing the Dream investor-based tax credit would help fund the construction or renovation of more than 100,000 single-family housing units in distressed communities. Would permit the use of Section 8 vouchers to subsidize monthly mortgage payments.
Brownfields 	Would make more funds available to private companies and let state and local governments float bonds for cleanup. Supports making permanent the 1997 temporary tax incentive to write off cleanup costs. Better America Bonds, generating more than $9.5 billion over five years, would be used, in part, for brownfield cleanup.	Also would make permanent the brownfield cleanup tax incentive. Would establish high standards for brownfield cleanup, providing more flexibility than Superfund standards. Would protect developers from federal Superfund liability at brownfields cleaned up under state programs. Would reform the Brownfield Cleanup Revolving Loan Fund.
Land Use/Sprawl 	Through his Livable Communities Initiative and Better America Bonds, would use $1 billion in federal funds to promote "smart growth" policies. Calls for $2 billion in tax incentives to protect wilderness areas from development.	Supports increased state control over environmental policies and opposes federal action to curb sprawl, although Texas leads the U.S. in loss of prime and unique farmland to sprawl. Would encourage land conservation with tax credits.



www.annsacks.com 1+800+969+5217

CIRCLE 18 ON INQUIRY CARD

ANN SACKS

tile stone plumbing

OFF THE RECORD

A joint venture of Morphosis and Einhorn Yafee Prescott was selected for the $51 million National Oceanic and Atmospheric Administration Building in Suitland, Md., to be completed in 2003.

Prince Charles has established a scholarship for a young black person to study architecture in the U.K. The fund is in memory of a black teenager, Stephen Lawrence, an aspiring architect who was stabbed to death seven years ago.

The Collateral Internship Task Force met in August and refined its resolutions to improve the transition from education to licensure. The resolutions, presented to each of the collateral organizations, will be made public in upcoming months.

A selection was expected weeks ago, but at press time no decision had been made for the $304 million Metropolitan Kansas City Performing Arts Centre project. Short-listed firms are Pei Partnership Architects with Charles T. Young, AIA, Cesar Pelli & Associates, David M. Schwarz/Architectural Services, and Moshe Safdie & Associates.

A competency-based Intern Development Program (IDP) is being developed by the AIA in conjunction with NCARB. The pilot will be initiated in Virginia, Illinois, and California, beginning in late 2001.

The Federal Reserve Bank of Dallas commissioned a team of Michael Graves & Associates and Pierce Goodwin Alexander & Linville (PGAL) to design its new Houston branch.

Women's Museum enlivens a coliseum

The Women's Museum: An Institute for the Future opened September 29 in Dallas. It is the first comprehensive center for women's history in the country.

The $23 million project, designed by New York architect Wendy Evans Joseph, AIA, with F&S Partners of Dallas, features more than two dozen exhibits—all thematic and many interactive—on topics including the women's movement; women in the arts, sports, and adventure; and female comedians. The interior showpiece is an electronic quilt, 30 feet tall, consisting of photographs, quotations, and video images highlighting the achievements of women.

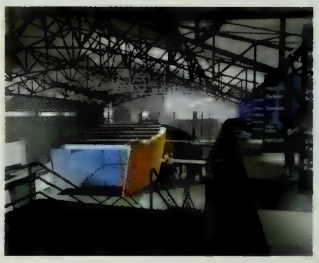
Set in Dallas' Fair Park, the museum occupies the 1909 coliseum, which was originally used for everything from livestock auctions to grand opera and later as an office building, warehouse, and workshop. Joseph meticulously restored the exterior, including Raoul Josset's sublimely kitschy statue of Venus rising from a cactus, and then created a crisp contemporary structure within. "I didn't want a complete break between inside and outside," she explains. "I wanted a dialogue and a feeling of continuity between old and new, like Paris' Musée d'Orsay."

The strengths of the existing building are its tall arched windows, steel roof trusses, and dramatic three-story core that resembles a turn-of-the-century train shed. Joseph's design celebrates these elements while giving the interior a modern openness and fluidity. From a shallow Art Deco lobby, a vestige of a 1930s renovation, visitors move directly into the soaring central space, from which they can see the entire museum at a glance. This room, called "The Gathering," is divided by a three-story diagonal wall, with administrative and storage spaces on one side and an auditorium, cafe, and museum shop on the other. A wall of perforated copper panels wraps around the shop on the first level, while an equally stunning cantilevered staircase rises to the exhibits on the second and third. A steel bridge, with a subtle springiness, connects the exhibition floors on the south end of "The Gathering."

The Women's Museum, the first institution of its kind in the country, should energize Dallas' spectacular but perpetually struggling Fair Park. Built in the 1930s and still fully intact, the park is largely moribund except during the annual state fair and summer rock concerts. The Women's Museum will give residents and visitors another, more substantive, reason to go there. *David Dillon*





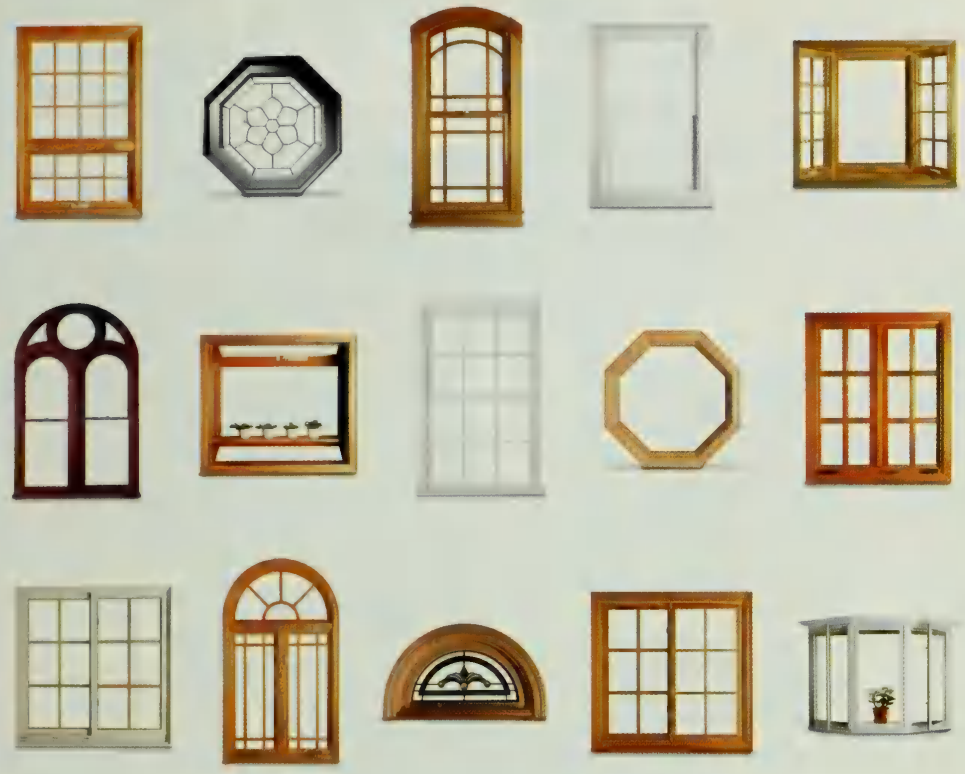


The Women's Museum: An Institute for the Future, inside a 1909 coliseum (above left), was designed by Wendy Evans Joseph. The interiors features an electronic quilt (top), and a great room called "The Gathering" (above right).

NYC Museum of Women narrows shortlist

While the Women's Museum: An Institute for the Future has opened in Dallas, a shortlist of seven architectural firms has been named for the Museum of Women: The Leadership Center, to be built in Manhattan's Battery Park City. The New York museum will present the history of women in North America chronologically, while the Dallas museum is organized thematically. Selected firms will complete schematic designs for the 125,000-square-foot museum within the next three months. A winning firm will be chosen in early 2001.

The seven firms are: a team of Marilyn Taylor, FAIA (of SOM), Laurinda Speer, FAIA (of Arquitectonica) and Frances Halsband, FAIA (of R.M. Kliment Frances Halsband); Gae Aulenti and Hellmuth, Obata + Kassabaum; Susanna Torre and Fox & Fowle; Weiss/Manfredi Architects; Audrey Matlock Architect; Smith-Miller + Hawkinson Architects; and Pei Cobb Freed & Partners. ***JEC***



At least the insulation is a no brainer.

Decisions. Decisions. Decisions. Selecting what looks and works best for your customers is a big part of your job. This can get a little mind-boggling considering all the choices you have out there.

At least with STYROFOAM* brand insulation, your choice for rigid insulation is easy. It's the brand professionals continually choose over other comfort and energy-saving options. Not only because it's a proven performer, but also because using it results in a well-built, energy-efficient structure. So when it comes time to think about your best insulation choice, don't give it another thought. Choose BLUE.†

DOW

Styrofoam™

Brand Insulation

The Preferred Choice!

www.styrofoam.com

*Trademark of The Dow Chemical Company

†The color BLUE is a trademark of The Dow Chemical Company

CIRCLE 19 ON INQUIRY CARD

Architect raising $$$ to keep developer from burying Graves

Indiana architect Matt Kelty, AIA, is on a crusade. He hopes to raise $595,000 by the end of November to purchase and save the Snyderman House, an early project by Michael Graves, FAIA, from demolition.

The 1972 Snyderman House, near Fort Wayne, Ind., is perhaps the best example of the Modernist work of Graves' early career. The developer that owns the property is planning to raze the house and develop a residential subdivision on the 40 surrounding acres. Kelty, a partner of Fort Wayne's Kelty Taylor Design Inc., is spearheading an effort to purchase the building and renovate it.



The home's original owners, Sanford and Joy Snyderman, parents of Nancy Snyderman, medical correspondent of ABC's *Good Morning America* and *20/20,* left the house in 1998 and sold it in December 1999 to developers Joseph Sullivan and William Swift. Sullivan and Swift have agreed to sell the home and 17.3 of their 40 acres of land to Kelty if he raises $595,000 by the end of November. The developer plans to build approximately 40 to 45 homes on the 17.3 acres.

Kelty has a way to go to raise the necessary funds. He has established a nonprofit organization named Eleventh Commission, Inc., because the house was Graves' eleventh commission. As of early September, Kelty had secured less than $25,000 and was actively seeking support from several charitable foundations. "A year from now, it may be in a landfill if we don't find the money to buy the house," Kelty says.

Graves, although busy, has been supportive, according to Kelty, and has put the Indiana architect in touch with potential donors. Graves was not informed when the Snydermans sold to a developer. "It was a big surprise," Graves says. "I don't have any projects that I want to see destroyed."

Asked what he thought of Kelty's endeavor, Graves says, "I think it's amazing."

If Kelty secures the house, he will allow a nonprofit organization to use the lower level and open the rest of the house to tours and educational programs. Although Sullivan and Swift will not make as much profit on the property if Kelty completes the purchase, Sullivan said he did have "a little compassion" for Kelty's efforts and was willing to sell if Kelty raised the funds.

"Our efforts are to preserve the house for cultural reasons," Kelty says. "I think it'll provide a measurable community service."

Kelty would also undertake a major rehabilitation project. The roof has leaked for years, and since the Snydermans left, hardwood flooring and plumbing fixtures have been removed by vandals, according to Sullivan. Kelty says Nancy Snyderman had a circular steel staircase removed.

The Snydermans donated a 7-by-22-foot wall mural from the house to the Indianapolis Art Center. Kelty says the mural would be returned to the house if the purchase is completed. *JEC*



PHOTOGRAPHY: © CLINT KELLER, FORT WAYNE JOURNAL GAZETTE

John Taylor, Jeff Tapp, Assoc. AIA, and Matt Kelty, AIA, (above, left to right) inside the Snyderman House, where flooring has been removed. Taylor, Tapp, and Kelty are board members of Eleventh Commission, Inc., a nonprofit organization founded by Kelty to raise funds to purchase the Graves house (left), which developers plan to raze.

Doc Award Winner

FOR THE BEST DESIGNERS,

THE MARK OF EXCELLENCE

IS THE DOC.

FOR CARPET, IT'S ULTRON® VIP.

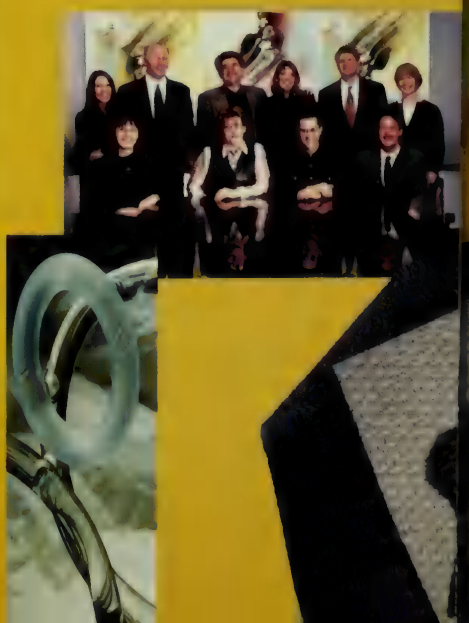
DESIGN TEAM *Nicholas J. Luzietti, AIA, IIDA; Maribeth Schwind; Tim Salisbury, AIA; Blair Brown; Rika Semba; Jamie Simoneit*

PROJECT *BlueCross BlueShield of Illinois*

CARPET *Shaw Contract and Invision Carpet Systems*

FIBER *Ultron® VIP Nylon 6,6*

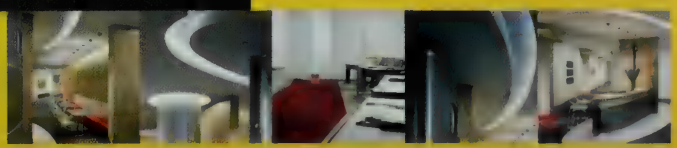
WINNING DESIGN FIRM *VOA Associates, Inc., Chicago, IL*





Design training

Challenged to create an 80,000 square-foot training facility below-grade, VOA designed this warm and upbeat environment. Sculptured light columns punctuate carpet of Ultron® VIP nylon with a definite hospitality feel. Invision Carpet Systems "The Gap" and "Bridge" visually ground the space, while "Earl's Court" carpet tile from Shaw Contract is ideal for the raised floor in the training rooms.



The best designs use
the fiber of choice: Ultron® VIP nylon 6.6

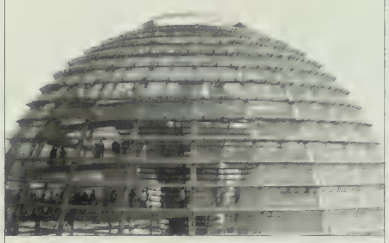
Enter the 2000 Doc Awards! Let us tell you more: 800-543-5377, 770-951-7600 or www.ultronvip.com.

CIRCLE 20 ON INQUIRY CARD

SOLUTIA



The Reichstag
Architect Foster and Partners
Photographer Nigel Young/Foster and Partners



You've done years of hard work. You want respect and a little recognition.

We think you've earned the right to a few letters after your name.

The RIBA is a highly respected architectural title throughout the world, which is why you have worked so hard to earn it. The RIBA works hard too, setting its own standard for architectural education, and monitoring the professional integrity of its members. Only Corporate members who have made the grade can use the RIBA letters to show that they have the highest professional standards and expertise. In return, Corporate members can be assured that the RIBA will provide essential professional services and will continue to promote the value of architecture for all.

Full architect members of the AIA are eligible to join the RIBA, call +44 20 7307 3650 or email membership@inst.riba.org for more information.

Corporate membership
www.architecture.com

CIRCLE 21 ON INQUIRY CARD

Record News

ROMA Design Group wins MLK Memorial competition

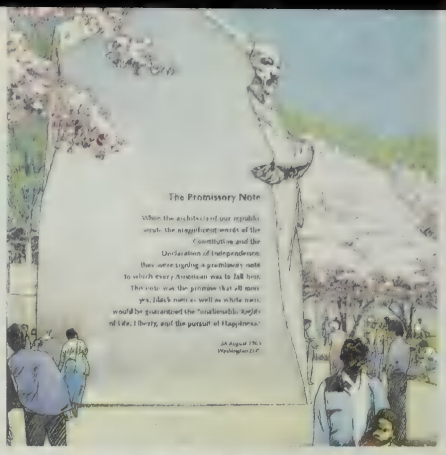
A design by ROMA Design Group of San Francisco won the competition for the Martin Luther King Jr. National Memorial in Washington, D.C.—the first memorial on the Mall commemorating an African American and the first dedicated to a person who was not a U.S. President.

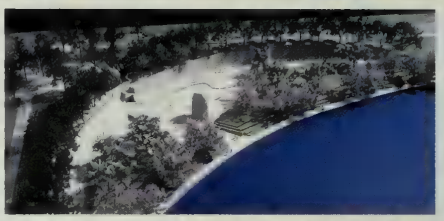
"Our design for the memorial is not intended to be a eulogy. The memorial is about life and the promise of positive social change and the pursuit of higher levels of achievement related to human rights and civil liberties," said Boris Dramov, FAIA, a ROMA partner, in his remarks on September 13 at the announcement of the winning design.

The selection was made from a field of more than 850 entries from 34 countries. The memorial is planned for a site, approved in 1999, at the northern rim of the Tidal Basin, near the Franklin D. Roosevelt memorial. The design must be approved by several commissions before construction can begin, likely in 2003.

"It's a very exciting endeavor. Martin Luther King was an American hero of our generation," says Dramov, who credited the teamwork of his partners, Jim Adams, AIA, Bonnie Fisher ASLA, Burton Miller, AIA, and Joel Tomei, AIA, in undertaking the competition.

Key elements of stone, water, and trees are prominent in the memorial, which is a curved plaza along the Tidal Basin. King's words are inscribed in stone, water recurs as a symbol of justice, and trees reinforce the spatial integrity of the memorial. Natural landscape features help convey themes of democracy, justice, and hope.







ROMA Design Group partners include (from left) Jim Adams, AIA, Bonnie Fisher, ASLA, and Boris Dramov, FAIA. The memorial (middle) includes a Stone of Hope (top) with Dr. King's words inscribed.

A monolithic single stone, the "Stone of Hope," incorporates a representation of Dr. King on one side facing the Jefferson Memorial. Dr. King is pointing a pencil in one hand to the words he wrote in "The Promissory Note."

"The design embodies the spirit of this truly great leader, and the memorial will serve as a place of peace, reflection, and inspiration," says Adrian Wallace, director and president of the Martin Luther King Jr. National Memorial Project Foundation.

ROMA Design Group's notable projects include Santa Monica's Third Street Promenade, the Mid-Embarcadero Open Space and Transportation Project in San Francisco, and a plan for areas of San Jose. *JEC*

ARE Pass Rates Rise

Candidates' pass rates improved in seven of nine divisions of the Architect Registration Examination (ARE) from 1998 through the first half of 2000.

ARE Pass Rates by Division

	1998	1999	2000*
Multiple Choice Divisions			
Pre-Design	63%	69%	72%
General Structures	71	74	76
Lateral Forces	81	86	87
Mechanical & Electrical Systems	80	85	79
Materials & Methods	88	89	91
Construction Documents & Services	82	84	85
Graphic Divisions			
Site Planning	71	72	75
Building Planning	70	69	66
Building Technology	72	75	79

Source: NCARB

*Through June 2000

ARRESTING NEW LOOK SERVES AND PROTECTS

Take everything you know about how a police station should look. And ignore it for just a second. That's exactly what architect Clifton Allen did. And his North Hollywood police station is a stunning example of an architect's vision. And Pittsburgh Corning Glass Block.



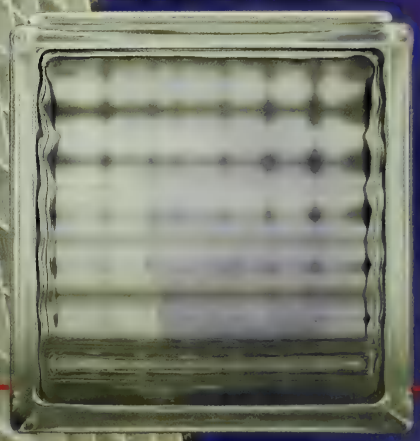
"This building had to embody the LAPD's more open, community-oriented mission. The ARGUS® pattern glass block was really critical in creating that openness. It gives us the perfect balance of light and security." – Clifton Allen

Every day, we help architects like you design bright, beautiful buildings that address the evolving needs of today's clients. With the widest selection of glass block designs, sizes and accessories. And the most experienced technical service professionals in the business. Count on Pittsburgh Corning to help bring your visionary solutions to life.

Call us at 1-800-992-5769 for information on Pittsburgh Corning Glass Block or to recommend one of your projects for future "Profiles." To see more visionary solutions, ask for our Idea Book or visit our newly updated website at **www.pittsburghcorning.com.**

CONTINUING EDUCATION AIA

North Hollywood Police Station
North Hollywood, California.
Firm: Meyer & Allen Associates.
Architect: Clifton Allen



PITTSBURGH CORNING
GLASS BLOCK™

CIRCLE 22 ON INQUIRY CARD



Custom
Double
Hung Window
Designed by
Kurt Dubbe A.I.A.
Custom Manufactured
by... **BERGERSON**

It isn't that we mill our Export Grade Clear Western Red Cedar to a four thousandth of an inch tolerance that defines our uniqueness. It's that every window and door is custom manufactured to your specifications.

When ordinary run of the mill just won't do, and cost is a consideration but not an issue . . .

CEDAR WINDOWS & DOORS
By **BERGERSON**

P.O. Box 184, Hammond, OR 97121
Tel. 503/861-3534 • Fax 503/861-0316
E-mail bcw@pacifier.com
Visit our web page www. bergersonwindow.com
Call 1-800-240-4365
For FREE BROUCHUE and more information...We're ready when you are.

CIRCLE 23 ON INQUIRY CARD

Record News

Growth on French housing



Plants will grow on these walls of volcanic rock.

A recently inaugurated experiment in green architecture in the south of France has aroused considerable interest. Completed in May, Edouard François' block of 64 flats on the banks of the River Lez, Montpellier, will eventually support a cloak of hearty plants.

Prefabricated gabions, or slablike cages that comprise contain crushed volcanic rock, pig manure, cacti, fig seeds, and an irrigation system within a stainless-steel grille. François has also designed a dozen wooden cabins on gold-colored pilotis from which tenants can enjoy exterior views of the living facade. The open-topped summer houses project through foliage of surrounding trees, overlook the River Lez, and connect with the main structure via bridges.

The French Ministry of Culture provided $3 million toward construction. As a result, the private-sector project is included in the millennium celebratory program, organized by the French government body Mission 2000. Local authorities, however, played hardball with the Paris-based architect, who had to seek special authorization. "[They said] it looks so crazy and curious," François says. Nevertheless, François received the go-ahead, but not before proving that there would be "no maintenance for 50 years," in lieu of the usual 10. *Robert Such*

New Public Works competitions to invigorate civic realm

An innovative National Endowment for the Arts (NEA) grant program will fund architectural competitions to enhance the public realm. Ten recipients were announced in August for the first round of New Public Works, a new NEA design initiative. Recipients each receive approximately $50,000 to conduct design competitions within the next year for public buildings and spaces.



The competition poster

Recipients include a Chicago Public Housing Authority competition for multiple public-housing units to be used as prototypes. Another recipient, the Seattle Art Museum will launch a competition for the Olympic Sculpture Park on the downtown Seattle waterfront.

"We're very pleased to have a full spectrum of projects. It's a good cross-section," says Mark Robbins, the NEA's director of design. "In initiating the competitions, we hope a design dialogue begins in each of these cities."

New Public Works recipients are the Black History Museum and Cultural Center, Richmond; Booker T. Washington High School for the Performing and Visual Arts, Dallas; Business and Professional People for the Public Interest, Chicago; Chicago Housing Authority; Flemington Jewish Community Center, Flemington, N.J.; LINC Housing Corporation, Long Beach, Calif.; Municipal Art Society, New York; Pittsburgh Children's Museum; Seattle Art Museum; and Tucson-Pima Arts Council.

One recipient, the Business and Professional People for the Public Interest, a Chicago-based law and policy center, will conduct the "Big Shoulders, Small Schools" competition to design two new universally accessible elementary schools for Chicago public schools. This hybrid open and invited competition has open registration due December 1. Invited firms are Ross Barney + Jankowski of Chicago, Koning Eizenberg Architecture of Santa Monica, Calif., Merrill Elam Architects of Atlanta, and Smith-Miller + Hawkinson Architects of New York. Eight finalists will be announced in January, and two winners, one per school, will be chosen in March.

This was the first of what Robbins hopes will be an annual New Public Works program. Letters of interest for the next round of New Public Works grants are due January 11, 2001, for competitions to commence between September 1 and November 1, 2001. In this round, the NEA will focus on competitions for landscape projects, but entries are open to architecture, urban planning, graphic design, and industrial design as well. *JEC*

THE FUTURE OF CONTINUING EDUCATION!

Introducing RedVector.com

Now you can get professional continuing education online, without ever having to leave your home or office...

- **NO Travel**
- **NO Hotels**
- **NO Boring Seminars**

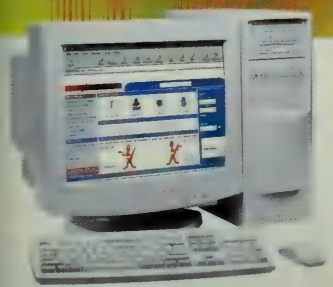
With **RedVector.com**, you can fulfill all of your continuing education requirements ONLINE, in real time. The **RedVector.com** website provides you with the information you need - when you need it, 24 hours a day.

Our online Group Hosts are trained in the rules and regulations of every state, and are available "live" 18 hours a day, seven days a week for personal interaction. Our entertaining format is designed to keep you up to date, satisfaction guaranteed.

- **FREE Personal Online Assistance 18 hours a day, 7 days a week, 7AM-1AM EST**
- **FREE Online Course when you register as a new user**
- **FREE Updates on news and events in your profession**
- **FREE Submission of completed credit hours to State Licensing Boards**
- **FREE Messaging Forum interaction with other industry professionals**

Visit **RedVector.com** today and discover the industry's largest selection of continuing education offerings!

Mention this ad and receive a FREE ONLINE COURSE when you register as a new user at www.RedVector.com



REDVECTOR.COM

Continuing Education For Licensed Professionals

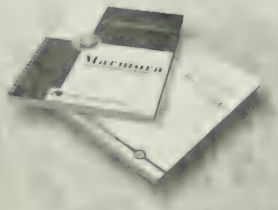
CIRCLE 24 ON INQUIRY CARD

Email: info@RedVector.com or Call 813/207-0012



ITALIAN





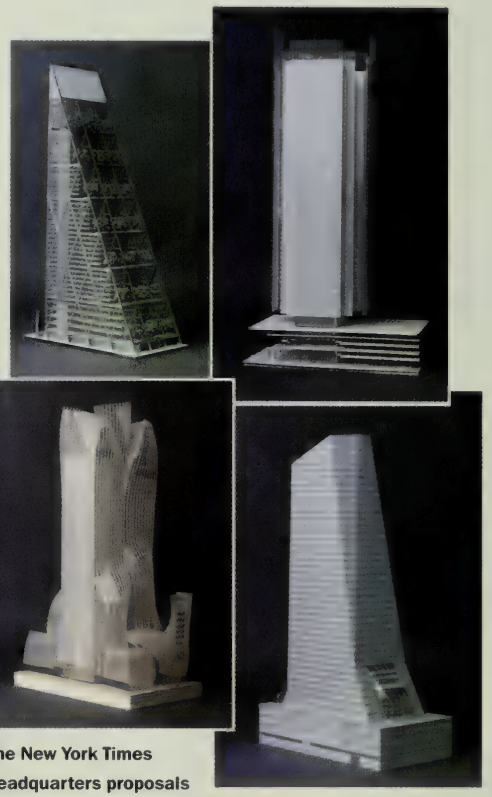
Receive your free Marmora book with ASTM and buyers guide

www.marblefromitaly.com

Italian Trade Commission
1801 Ave of the Stars
Suite 700
Los Angeles CA 90067
323 879 0950
Fax 310 203 8335

CIRCLE 25 ON INQUIRY CARD

Four vie for coveted NY Times tower project



The New York Times headquarters proposals (clockwise from top left) by Foster & Partners, Renzo Piano, Cesar Pelli, and Frank Gehry with SOM.

Architectural models by four finalist teams were unveiled in mid-September for a new *New York Times* headquarters tower. The four teams are: Renzo Piano Building Workshop; Foster & Partners; Frank O. Gehry & Associates with Skidmore, Owings & Merrill; and Cesar Pelli & Associates. The New York Times Company was expected to choose an architect by the end of September.

The tower will be built on Eighth Avenue between 40th and 41st Streets, across from the Port Authority Bus Terminal. The New York Times Company, with its development partner, Forst City Ratner Companies, plans 1.3 million square feet of space in a 650-foot-tall tower. *The Times* would occupy at least half of the building, including most of the base, and the remainder would be leased to commercial and retail tenants.

Foster proposes a triangular tower, with a high point on Eighth Avenue and an angled facade to the east, with verdant terraces at every seventh floor. Gehry and SOM designed an undulating facade, with the letters "N" and "Y" at the top of the building in Times typeface. Pelli proposes an angular, tapered tower with large tree-filled atria where the tower meets the base. Layered, sheer glass screens surround Piano's rectangular tower, which has a five-story atrium.

In a memo to *Times* employees, cited in a September 14 *New York Times* article, Michael Golden, vice chair and senior vice president of the New York Times Company, wrote, "The models represent the architects' design concepts at this time. The architect who is chosen will then embark upon a yearlong, detailed, and complex process to design the building that we will ultimately occupy."

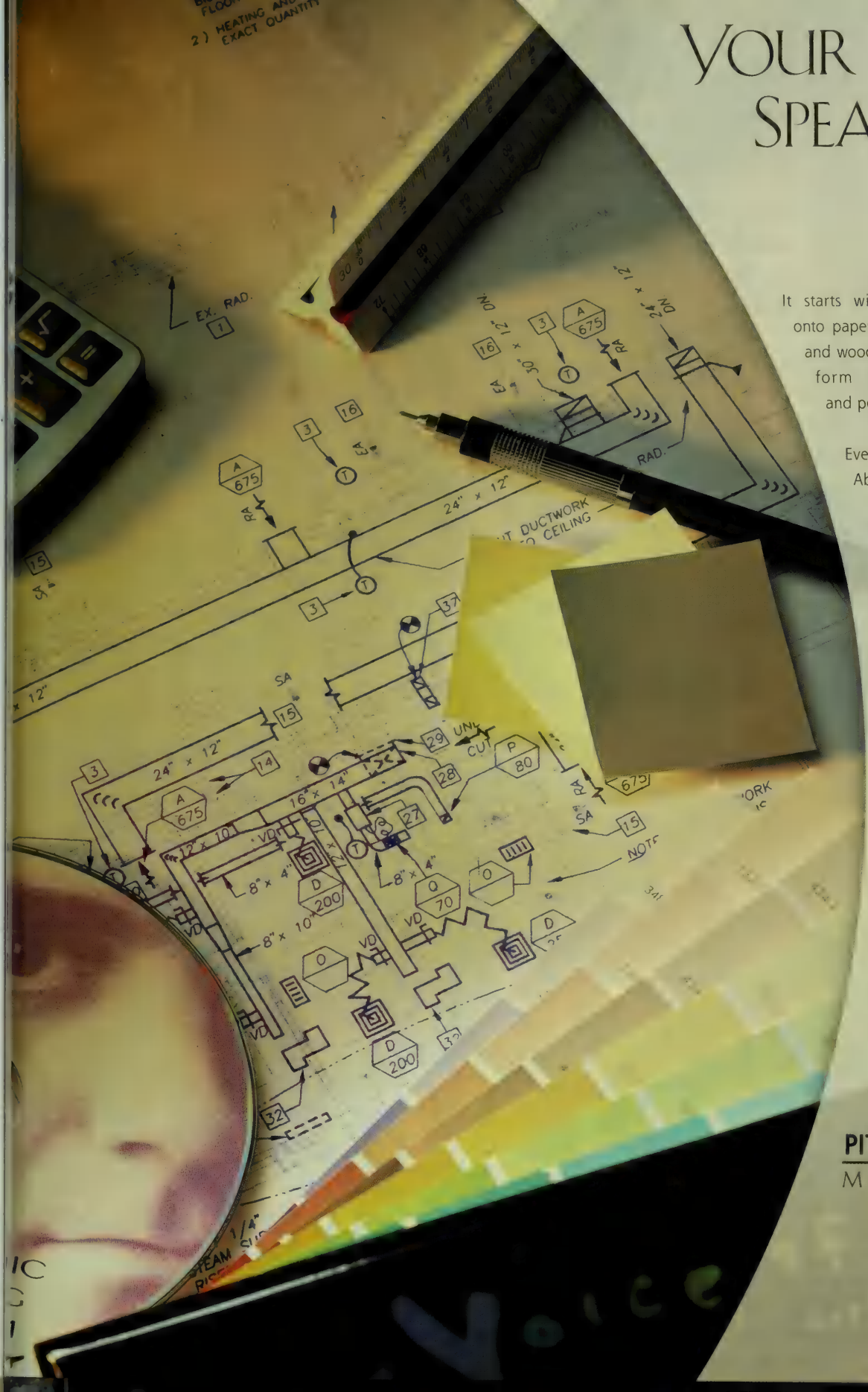
The Times has been at its current headquarters at 43rd and Broadway, a few blocks from the new site, since 1913.

"We want a building that is an icon, that speaks to our heritage and also speaks to our future," Golden told the *New York Times*. *JEC*

Gehry, Lapidus, Hejduk honored as national treasures

Architects Frank O. Gehry, FAIA, Morris Lapidus, and the late John Hejduk were honored with the first National Design Awards by the Smithsonian's Cooper-Hewitt National Design Museum. The awards, presented on September 18 at the White House, recognize excellence, innovation, and public impact. Gehry, 71, won the lifetime-achievement award, and Apple Computer won a corporate achievement award. Lapidus and Hejduk (posthumously) were honored with "American Originals" awards. Lapidus, 97, is the legendary Miami hotel and retail architect. Hejduk died in July at age 71, after serving for 25 years as dean of the Irwin S. Chanin School of Architecture at the Cooper Union in New York City.

Three more National Design Awards for environment (including architecture, interiors, and landscape), product design, and graphics will be bestowed at a formal gala at the Cooper-Hewitt on November 15. Finalists in the environment category are: landscape designer Lawrence Halprin and architects Will Bruder, Steven Holl, AIA, Thom Mayne, AIA, and Samuel Mockbee, FAIA. ***JEC***



Your Work Speaks For Itself

It starts with a vision, finds its way onto paper, takes its final form in steel and wood and glass. A combination of form and function. Aesthetics and performance.

Every design makes a statement. About you and your firm.

That's why *Pittsburgh*® Paints offers you a full array of professional specifier support services: A comprehensive, high-performing product line. An experienced technical field team, along with dedicated phone line support. The vast resources of PPG – a global leader in coatings and glass technology. Plus innovative color systems designed to make color selection easier – and more expressive – than ever. So make a statement.

Make it loud and clear.

PITTSBURGH PAINTS

MAKE A STATEMENT

1-888-PPG-SPEC
www.pittsburghpaints.com

CIRCLE 26 ON INQUIRY CARD

PPG



architectural portraits
illustrated bronze maps
terrazzo embedments
pavement inserts
sculptural installations

27 Bleecker St NY NY 10012
Telephone 212 677 1445
LeFevreStudio@rcn.com

CIRCLE 27 ON INQUIRY CARD

Preserving Wright's and Richardson's Chicago-area icons

Three important Chicago-area buildings by Frank Lloyd Wright and H. H. Richardson are getting the comprehensive preservation they deserve. Exterior restoration has been completed at Richardson's Glessner House, and work is beginning on Wright's Unity Temple and Robie House.

This summer, at the 1886 Glessner House, a year-long $850,000 courtyard, roof, and window restoration reached completion. A kitchen porch, removed 20 years ago, was re-created, and a decrepit central porch rebuilt.

Funded in part by the Getty Grant Program and the City of Chicago, the Glessner work has made a remarkable difference in public perception of the fortresslike structure. The granite street facade was cleaned in 1984. Not addressed were the salmon-colored, brick-faced courtyard, which had turned black with soot and grime, and the deterioration of the terra-cotta roof. Project manager Anne T. Sullivan, of Chicago's Johnson-Lasky Architects, says, "The things we did were rather straightforward—masonry cleaning, tuckpointing—but seeing all these warm tones underneath, we learned much about Richardson's design intent."

Two of Wright's important projects have also required attention. His Unity Temple, the first large-scale reinforced-concrete structure in the United States, needs reinforcement. The 1908 Oak Park, Ill., landmark was named this spring by the Landmarks Preservation Council of Illinois (LPCI) as one of the 10 most endangered structures in Illinois. A $5 million restoration effort has begun, led by Construction Technology Laboratories of Skokie, Ill. and including $1 million concrete stabilization and roof repairs, to be completed in 2002.

The almost entirely blackened exterior concrete has hastened deterioration of the building's steel, threatening overall structural integrity. A complete roof replacement will follow the other repairs. The goal for all restoration work is 2009. In April, Unity Temple was identified in the National Trust for Historic Preservation's "Save America's Treasures" program, qualifying it for multiple funding sources.



Work on H.H. Richardson's Glessner House included masonry cleaning on the courtyard and a restored terra-cotta roof.

Robie House, owned by the University of Chicago and managed by the Frank Lloyd Wright Preservation Trust, is in the midst of a 10-year, $7 million restoration program. Asbestos removal was completed last fall, and restoration of the home's 174 art glass windows is under way. Efforts to restore the 1909 exterior, including a new clay-tile replica roof, start in spring 2001. The existing 1960s roof is not historically accurate, and water has been leaking into the house. Robie House will remain open to visitors throughout the project, scheduled for completion in 2007.

JEC and Tom Connors



Wright's Robie House (far left) is in the third year of a 10-year, $7 million restoration. Unity Temple (left) was named by the Landmarks Preservation Council of Illinois as one of the 10 most endangered structures in Illinois.

Acrystone®... the versatile *exterior* solid surface material.



- ✔ **Unlimited design capabilities.**
- ✔ **Renewable surface.**
- ✔ **Non-porous / stain resistant.**
- ✔ **Does not dent or delaminate.**
- ✔ **Cleans easily.**

Due to its light weight and versatility in fabrication Acrystone can be easily used to up grade the brick facade of a building during renovation.

Due to its durability and renewable surface, Acrystone is ideal for use in schools and other high traffic areas.





For a free CD about Acrystone and its features, call or visit our Web site to fill out an e-mail request form.

www.AristechAcrylics.com/architectural

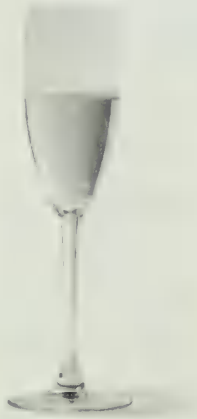
ARISTECH ACRYLICS LLC

Quality that comes to the surface.

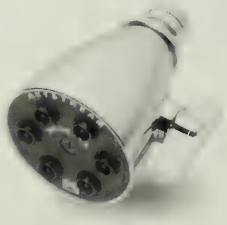
Aristech Acrylics LLC, 7350 Empire Drive, Florence, KY 41042, U.S.A.
Phone (859) 283-1501. FAX (859) 283-7378.

It isn't metal. It isn't stone. It's Acrystone.

CIRCLE 20 ON INQUIRY CARD







SPEAKMAN

www.speakmancompany.com
1.800.537.2107

CIRCLE 29 ON INQUIRY CARD





Sydney's Museum of Contemporary Art (left) is on a prominent site near the Opera House (far left).

Selection for Sydney's MCA questioned

Sydney's Lord Mayor, Councillor Frank Sartor, describes the commission to redevelop that city's Museum of Contemporary Art (MCA) as "the most prominent architectural commission for a cultural venue in Sydney since the Opera House." The architect-selection process, however, has been riddled with questions. Four firms are currently developing proposals to present to a jury chaired by Renzo Piano in November, but Japanese architect Kazuyo Sejima believes the commission should be hers.

Three years ago, Sejima won a commission to design a $14.3 million cinematheque that would be adjacent to the existing building. When excavation began, historic findings halted the process. Funding dried up, and it was not until the Sydney City Council recently took over MCA that the project seemed viable again. A council spokesman said Sejima had been invited to submit "under the same conditions as the others," for what is now a different, bigger project with a much larger budget. "She's a very good architect, but we couldn't agree on the terms, so we had to withdraw the offer. There is baggage from the previous job."

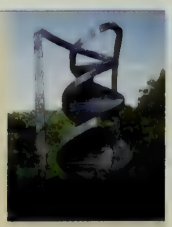
Sejima, who had a 1997 contract with the museum, wrote to the MCA seeking an explanation: "We are quite confused, as we were duly appointed as an architect for the [MCA] Stage II development."

The Sydney City Council invited the following architects to submit design concepts for the $33.8 million project, which will expand the existing MCA, a historic sandstone building, from 86,000 to 205,000 square feet: Rafael Moneo of Spain, Francesco Venezia of Italy, Matthias Sauerbruch and Louisa Hutton of Germany, and Richard Francis Jones and Nonda Katsalidis of Australia. An adjacent site will be home to a new moving-images center.

Located at West Circular Quay, opposite the Opera House and in view of the famous Harbour Bridge, the MCA is the city's most visible, sensitive, and prestigious commission since the renowned Opera House. The museum has had a troubled administrative and financial history and has been subject to much political intrigue.

Interviews and finalist presentations will take place in November, and an architect will be selected before the year's end. *Anne Susskind*

Jencks spirals in Long Island



Wondering what Charles Jencks, who is credited with labeling Postmodern as an architectural style in the 1970s, is doing lately? Head to Cold Spring Harbor Laboratory (CSHL), to see *Spirals Time—Time Spirals,* a monumental sculpture designed by the architect/author. The sculpture was installed in September at CSHL, the world-renowned biomedical research institution on Long Island, N.Y.

For Jencks, who labeled Postmodern in his 1977 book, *The Language of Post-Modern Architecture, Spirals* is an offshoot of his recent Garden of Cosmic Speculation, a science-themed landscape in Scotland. Jencks sees in his role as architect/artist an opportunity to "visualize and spatially redesign scientific metaphors about the Universe." *Spirals,* 15 feet tall and 8 feet wide, is a winding stair that forms a literal (perhaps Postmodern) double helix in sandblasted aluminum.

The sculpture was commissioned by the director of CSHL, Nobel laureate Dr. James Watson, who discovered the DNA double-helix structure in 1953 with colleague Francis Crick. Long interested in the relationship between art, architecture, and science, Watson has led an ambitious expansion of CSHL's campus and its public art collection, which includes works by David Hockney, Dale Chihuly, and Michael Malpass. Jencks' permanent installation highlights an outdoor art show at CSHL, *Sculpture by the Sea,* running through October 31. *Susanna Sirefman*

Our Fire Doors Are Starring In An Application Near You



The RITE Door®

Integrated Door Systems

The Rite Door is the one source solution for fire-rated doorways. It combines integrated, pre-installed hardware and innovative design for a beautifully simple fire door that is quick to install and easy to maintain. The Rite Door is soundly constructed with Grade 1 Exit Hardware and meets the strictest building codes and ADA guidelines. For theaters, and lots of other applications, The Rite Door is a stellar performer.

The Rite Door integrates factory assembled hardware and door with a wide range of custom finishes and options.

Contact Adams Rite for more information.

ADAMS RITE
MANUFACTURING CO.

CIRCLE 30 ON INQUIRY CARD

260 Santa Fe Street, Pomona, CA 91767 • 800-872-3267 • Fax: 800-232-7329 • www.adamsrite.com

News Briefs

Ferrell floats Seattle aquarium design A preliminary design for the Pacific Northwest Aquarium in Seattle, by British architect Terry Ferrell with Seattle firm Mithun, was unveiled in July. Although funds for the $206 million aquarium have not been raised and a specific site has not been chosen, Ferrell's preliminary design offers a glimpse of a bowl-like waterfront structure that is built completely offshore. The transparent and translucent bowl would open to Puget Sound. A water garden on the roof would include tidal pools, walking paths, and shell and rock gardens.

"Within the shell is a complete world of natural habitat. The exhibits kind of tumble into Puget Sound," said Doug Streeter, project architect for Terry Ferrell & Partners, in a statement to the *Seattle Times*. A number of waterfront sites are being considered, and Seattle City Council must approve the location. The aquarium would open in 2007, at the earliest.

Regulatory program for interior designers vetoed in California California Governor Gray Davis vetoed Assembly Bill 1096, which would have created a new regulatory program for interior designers. In a statement on the September 10 veto, Davis said, "Government intervention in a marketplace should be reserved for cases where there is consumer harm."



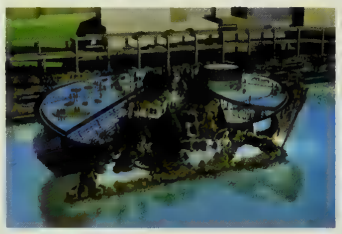
Sasaki

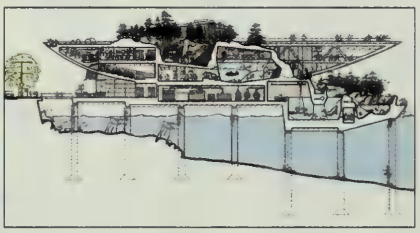
Landscape pioneer Sasaki dead at 80 Hideo Sasaki, founder of the firm Sasaki Associates, died of cancer September 6 at age 80 in Walnut Creek, Calif.

Sasaki, a native of California, taught at Harvard Graduate School of Design, where he was chair of the landscape department from 1958 to 1968. In 1953 he founded the firm Sasaki Associates, which today has offices in Watertown, Mass., and San Francisco. Among Sasaki's many well-known landscape and urban-design projects are the First Church of Christ, Scientist in Boston, and corporate projects for IBM, Bell Laboratories, Deere & Co., and the University of Arizona.

Elizabeth Gordon dies at 94, former House Beautiful editor Elizabeth Gordon, who called her office at *House Beautiful* "an extension of Taliesin," died September 3 in Adamstown, Md. A close friend of Frank Lloyd Wright, Gordon was editor of *House Beautiful* from 1939 to 1964. In the magazine she railed against the International Style, devoting two issues to Wright, who referred to himself as her godfather.

Terry Ferrell's design for Seattle's Pacific Northwest Aquarium is completely offshore.



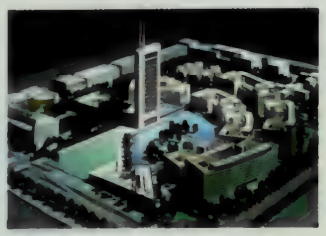


WWW *Can't get enough architectural news? There's more. For up-to-date headlines each weekday, click on* **News** *at:* **www.architecturalrecord.com**



CIRCLE 31 ON INQUIRY CARD

News Briefs



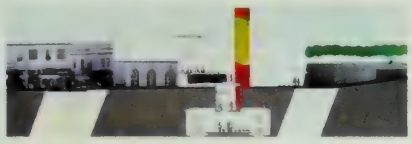
Cyber City in Shenzhen, China

Pei's Cyber City planned for Shenzhen, China Pei Partnership, with Sherman Kung & Partners of Hong Kong, has completed a master plan and is developing schematic design for all buildings in Cyber City, a 100-acre high-tech office park in Shenzhen, China. The office park will be home to software-technology and related companies, some of which are based in China. Microsoft, Motorola, and Oracle have already expressed interest. Pei Partnership will be design architect for nearly all of the 23 buildings, totaling 4–4.5 million square feet. Construction will begin in 2001, with completion in 2004.

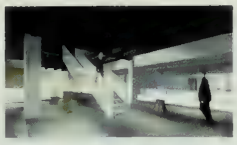
Winners chosen for Harvey Milk Memorial Harvey Milk, San Francisco's first openly gay supervisor, and Mayor George Moscone were assassinated in 1978. Affectionately known as "The Mayor of Castro Street," Milk will be remembered with a memorial plaza in that city's Castro District.

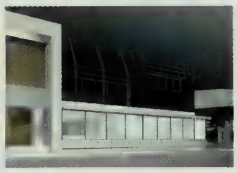
Two winners, both German transplants to San Francisco, were recognized September 13 for the San Francisco Prize 2000: Harvey Milk Plaza International Design Competition. One of the winning schemes is by landscape designer Christian Werthmann of Oakland, Calif., with LOMA Architects. The other winner is by Heidi Sokolowsky of John Winder Architects, San Francisco, with Sabine Engelhardt of Oxford, U.K. Both teams received a $3,500 prize. Three teams received Special Recognition and $1,000 each. The competition drew 112 entrants from around the world.

Sokolowsky's plaza design with "vision tower"



Werthmann's design incorporates fog-making installations that would create multicolored clouds over the site, at the intersection of Market, Castro, and 17th Streets. Sokolowsky's design includes a 60-foot-tall "vision tower" that would display electronic moving images in the intersection.





Hariri & Hariri's showroom, with glass staircase (top)

A final design will incorporate various aspects of the winning plaza plans, which the public will review in a November community meeting.

Hariri & Hariri design showroom for Tui Pranich The New York firm Hariri & Hariri has completed a home-furnishing showroom for Tui Pranich in the Miami Design District. The 5,000-square-foot space will open this winter. The interior includes a 50-foot-long wall of concrete and wood, incorporating the reception desk, a display area, and a narrow pool of water. Shallow pools of water will metaphorically transform the showroom into an island. A striking glass staircase leads to second-floor showroom space.

The work of Iranian-born sisters Gisue and Mojgan Hariri is on display at MoMA's *Un-Private House* exhibit.



Introducing the new Dishwasher Series from KitchenAid.
Totally redesigned, it's flexible enough to accommodate everything from delicate stemware to large cookware. The innovative wash system is quiet yet powerful. With door panels that can be easily customized and new split controls, this dishwasher is an efficient and beautiful way to leave a lasting impression. To learn more about the Dishwasher Series, and to view the entire KitchenAid® line, visit www.KitchenAid.com, or call 1.800.422.1230.

KitchenAid™

FOR THE WAY IT'S MADE

News Briefs

Toronto condos wall off lake Owing to outdated planning principles that allowed tall condominium buildings to wall off Toronto's waterfront, a complex will fill one of the last gaps in that wall with three towers, two of which are 37 and 21 stories each. Construction begins this month on Waterclub, a $155 million, 1,081-suite complex.

Kirkor Architects & Planners of Toronto and Vancouver designed the aluminum-and-glass towers, which will rise from a three-story podium with 15,000 square feet of retail, a day-care center, indoor/outdoor pool, health spa, and fitness center. Clifford Korman, a partner at Kirkor Architects, says, "Virtually every suite has a view of the water because of the towers' curvilinear forms, although the design doesn't turn its back on the city."



Toronto's Waterclub

Paul Bedford, Toronto's chief planner, says Waterclub is "a vast improvement over some of the earlier condo projects nearby. The developer is entitled to build to those heights because unused development densities were transferred from the south side of the road to the north side." However, he says, Waterclub is the "result of old thinking, old planning, and not something we would [plan] today because of the heights."

The city could not object to the project, Bedford says, because the developer met all of the city's zoning requirements. In the meantime, units are selling briskly and should be sold out by this fall. *Al Warson*

Architect runs for Congress Architect Jane Frederick, AIA, a Democrat, is running for Congress. This is Frederick's second attempt to oust Republican incumbent Floyd Davidson Spence, who has represented South Carolina's Second District since 1970. Frederick, who lost to Spence in 1998, is a partner in the firm Frederick and Frederick Architects, Beaufort, S.C., with her husband, Michael. Land use and the environment are key issues in her campaign.



Frederick

Good business The Business Week/Architectural Record Award winners [page 84] will be highlighted in a half-day conference, *Good Design Is Good Business, Design Strategies for the New Economy,* Friday, November 17, at the National Building Museum in Washington, D.C. Presented by *Business Week,* ARCHITECTURAL RECORD, and the National Building Museum in association with the American Institute of Architects, the conference will include discussions on successful architect-client collaborations to achieve business goals. The award winners will be honored, and a reception will follow for the opening of the museum's exhibit, *On the Job: Design and the American Office.*

Speakers include architects Arthur Gensler, FAIA, Herbert McLaughlin, AIA, and Richard Fernau, FAIA, as well as Kit Laybourne, head of Oxygen Media's animation group, and Steve Eisner, president and CEO of Eisner Communications.

For registration information, visit www.architecturalrecord.com.



art forms for public spac

from traditional to hi-tech, from old-fashioned to contemporary, from luxurious to affordable, from standard to custom, from monochrome to color, from relaxing to provoking — Canterbury International has been your source of architectural site furnishing for over 40 years!

Riviera bench and trash receptacle

For a complete catalog call Canterbur Internatior 1-800-935-711 or look us up at www.canterburyintl CIRCLE 32 ON INQUIR

PAC-CLAD
Petersen Aluminum

1005 Tonne Road • Elk Grove Village, IL 60007
1-800-PAC-CLAD or 1-847-228-7150
Fax: 1-800-722-7150 or 1-847-956-7968

Other Plant Locations:
Annapolis Junction, MD: 1-800-344-1400
Tyler, TX: 1-800-441-8661
Kennesaw, GA: 1-800-272-4482

NEW **Order online!**
http://www.pac-clad.com

INTELLIGENT CHOICE

PAC-CLAD
Metal Roofing

PAC-CLAD Metal Roofing Panels are a smart choice for your next project. Combining structural integrity with aesthetics, our roofing panels are also backed with a 20 year non-prorated warranty.

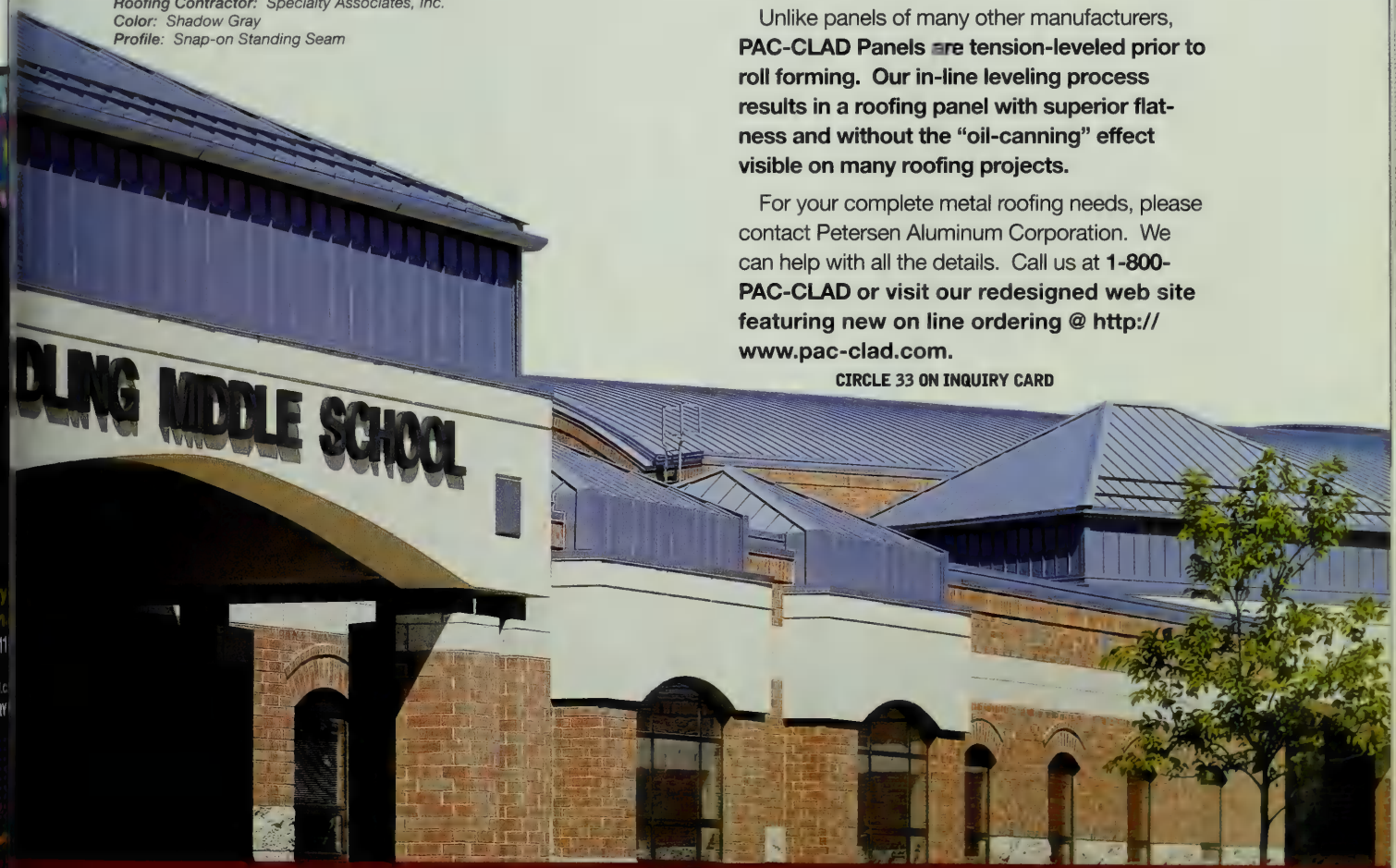
PAC-CLAD Panels are available from stock in 30 standard Kynar® colors. And beneath that durable color finish is something you can't see.

Unlike panels of many other manufacturers, **PAC-CLAD Panels are tension-leveled prior to roll forming. Our in-line leveling process results in a roofing panel with superior flatness and without the "oil-canning" effect visible on many roofing projects.**

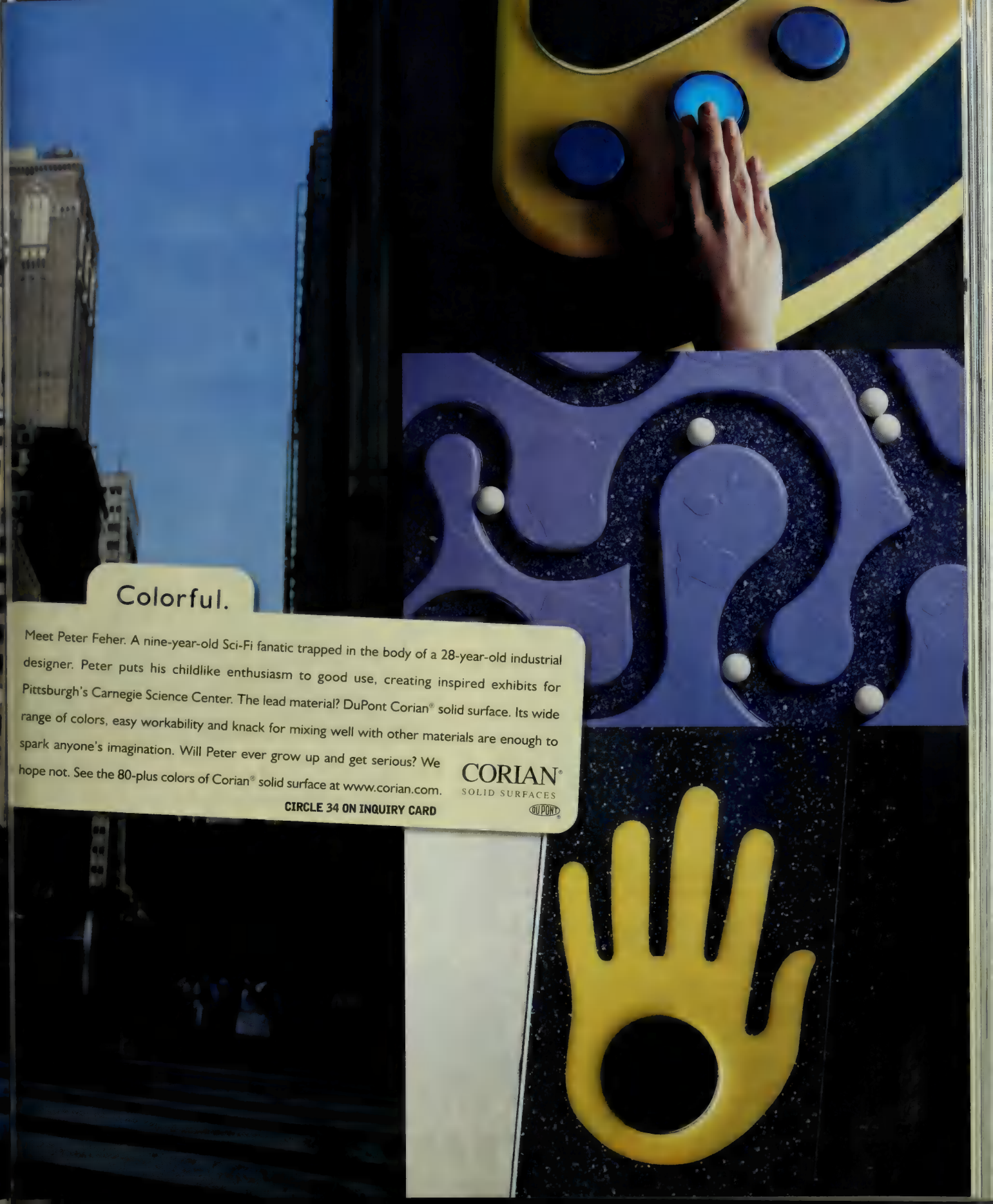
For your complete metal roofing needs, please contact Petersen Aluminum Corporation. We can help with all the details. Call us at **1-800-PAC-CLAD or visit our redesigned web site featuring new on line ordering @ http://www.pac-clad.com.**

CIRCLE 33 ON INQUIRY CARD

Wredling Middle School
St. Charles, IL
Owner: *St. Charles School District*
Architect: *Hestrup & Associates*
General Contractor: *E. W. Howell Co., Inc.*
Roofing Contractor: *Specialty Associates, Inc.*
Color: *Shadow Gray*
Profile: *Snap-on Standing Seam*




Shram in Sun, Mediterranean and Cobalt. Corian® is a DuPont registered trademark. Only DuPont makes Corian.



Colorful.

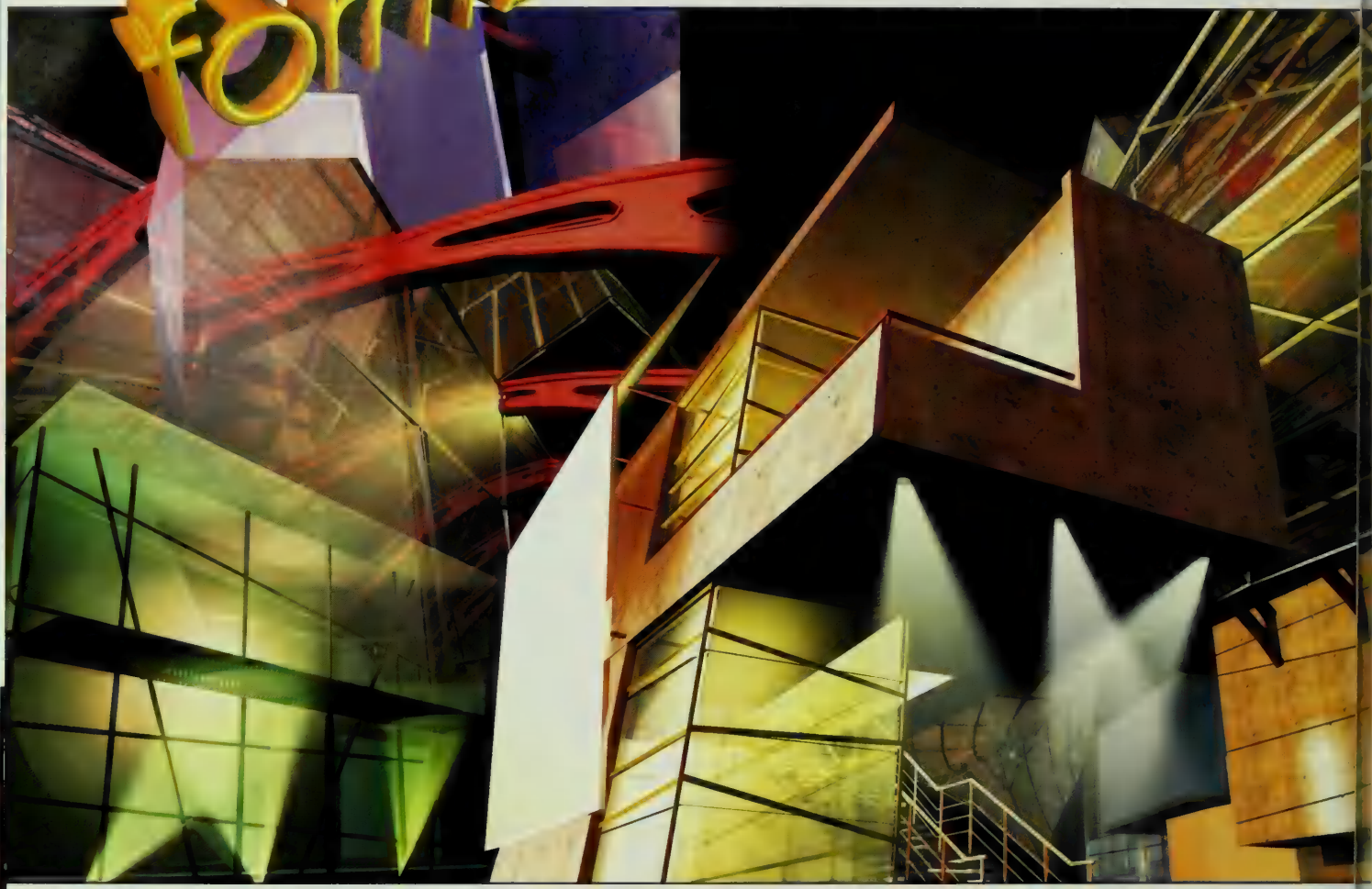
Meet Peter Feher. A nine-year-old Sci-Fi fanatic trapped in the body of a 28-year-old industrial designer. Peter puts his childlike enthusiasm to good use, creating inspired exhibits for Pittsburgh's Carnegie Science Center. The lead material? DuPont Corian® solid surface. Its wide range of colors, easy workability and knack for mixing well with other materials are enough to spark anyone's imagination. Will Peter ever grow up and get serious? We hope not. See the 80-plus colors of Corian® solid surface at www.corian.com.

CORIAN®
SOLID SURFACES
DUPONT®

CIRCLE 34 ON INQUIRY CARD

formZ

3D FORM SYNTHESIZER



From Sport City by Elisa Lui, Architectural Senior, University of California at Berkeley. Instructor: John Marx.

"Signifying a new age of dynamic movements, exciting advantages, and ultimate fun, the Sport City is a stage... Its form is derived from the shape of the human heart. Twisting, bending, and overlapping, the two organic glass tubes in the center move like the rushing red blood cell in our arterioles..."

auto•des•sys, Inc. is delighted to support the exploratory imagination of the novice designers that will shape tomorrow's physical world.



3D solid and surface modeling software at its best, with photorealistic rendering, radiosity, and animation. Visit us at **www.formz.com** to download a free demo. Call (614) **488-8838** or fax (614) **488-0848** for information.

Mac

autodessys INC

CIRCLE 35 ON INQUIRY CARD

Cranbrook's soul intact with help from Moneo, Holl, Williams and Tsien

Correspondent's File

By John Gallagher

Making over an architectural masterpiece poses tricky problems. How much new thinking can an architect apply to what's already in place? Can one be reverential without being intimidated by the past?

At Cranbrook Educational Community north of Detroit, a number of architects have been working out the answers to those questions in nearly a decade of creative building. A private family of schools spanning grades pre-kindergarten through 12 with three divisions on four adjoining campuses, as well as a graduate art school, Cranbrook focuses on teaching critical, creative, and independent thinking skills to approximately 1,500 students through grade 12, and 150 graduate students. With high standards in place for the campus architecture as well as curriculum, Cranbrook's leaders have recently broken new ground, literally, adding a building here, a gatehouse there, a new road, new sculpture, and an array of new light fixtures. They've opened up vistas on Cranbrook's wooded, rolling 315-acre campus. With the final addition now under construction, it's time to reassess how well Cranbrook's current stewards have updated the landmark campus.

The answer, in short, is that Cranbrook has succeeded admirably—but within the rather tight confines it set for itself. So restrained is some of the new work that it's hard to imagine another campus in which so much building has produced so little change in the overall character of the place.

While much of the new work succeeds brilliantly, it is ironic that such modest architecture has been built for an institution whose educational mission emphasizes boldness, creativity, and experimentation in the arts and sciences.

From the day in the 1940s when Eliel Saarinen finished his final project, Cranbrook Educational Community has stood as a world-class assemblage of buildings. Saarinen insisted that every act of creation, from the simplest doorknobs and bricks to the largest buildings and landscape features, contribute to an overall spirit of beauty. He gave Cranbrook not only a visual but a tactile character, choosing materials and forms that were woven, carved, hammered, or otherwise shaped by human hands.

Nothing new for 40 years

After the death of Saarinen and his patrons, founders George and Ellen Booth, Cranbrook stopped growing architecturally. Nothing new of any significance was built from the 1950s through the 1980s—partially for financial reasons and partially out of reverence for Saarinen's designs, a restraint that did little to plug leaky roofs or provide more studio space. By the mid-1980s, everyone knew something had to be done.

What to do and how to do it became subjects of fierce disagreement among faculty, trustees, donors, and architects. It was a mark of how contentious these debates became that those who revered Saarinen's work suggested that anything new be built underground. By the early 1990s, then-President Lillian Bauder, working with campus architect Dan Hoffman, had mapped out a plan to engage a select group of architects to tackle the major building projects. They agreed that no big signature projects should vie with Saarinen's landmarks, nor would his Arts and Crafts tradition be abandoned.

They went to great pains to find the right designers, bypassing both overexposed star architects and large corporate firms with hundreds of architects. They finally chose emerging talents with small but elite practices that could work within Cranbrook's Arts and Crafts heritage. Rafael Moneo of Madrid, who was selected to design the addition to the Academy of Art, went on to win the 1996 Pritzker Architecture Prize, and the rest of the architects involved have enhanced their reputations with several notable projects. The roster sent a clear signal that Cranbrook would meet the future with its soul intact.



Rafael Moneo's addition to the Academy of Art, to be completed in 2002.

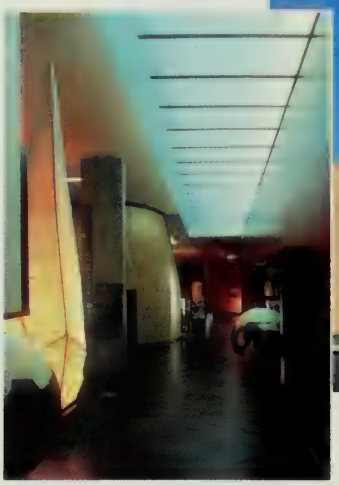
Hoffman, now concurrently a professor at Arizona State University, has been Cranbrook's architectural conscience for more than a decade. He and his students designed and produced many of Cranbrook's everyday features themselves—lighting fixtures, footbridges, and bits of sculpture that dot the campus. So it was not surprising that Hoffman

John Gallagher writes about architecture for the Detroit Free Press. *He is also writing a new edition of the* AIA Guide to Detroit, *forthcoming in 2001.*

would also craft the first big new addition, a Y-shaped, winged entrance for Cranbrook, completed in 1994, that some have likened to a bird in flight or even (not so strange for Detroit) a gas station. Perhaps too minimalist at first glance, the entry gives Cranbrook a small if necessary jolt of modernity. Next came an addition to Brookside, the elementary school, in 1996. To this rambling collection of country-cottage-style buildings Peter Rose of Montreal joined a lively if traditional two-story tiled-roof building with a facade of mottled concrete blocks in varying shades. Across campus, Steven Holl, FAIA, designed an addition to the Institute of Science, the most public of Cranbrook's buildings and the one that draws legions of elementary school students and other visitors. Tod Williams, FAIA, and Billie Tsien, AIA, designed the recently completed natatorium. Work is just now getting under way on Moneo's addition to the Academy of Art, which will house studios and exhibition space.

Subtle additions

Anyone who revisits Cranbrook for the first time in a decade or so will be surprised at how subtly all these additions fit into Saarinen's framework. No one produced the elaborate, signature designs that Bauder and Hoffman clearly did not want.

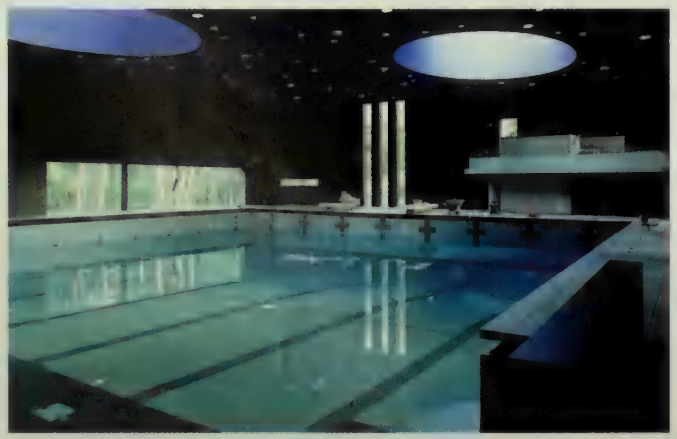




Steven Holl's addition to Eliel Saarinen's 1938 Institute of Science includes a 42-foot-tall entrance tower (above) and space for natural history and science exhibits (left). The Institute of Science draws 250,000 visitors annually.

Holl's expansion to Saarinen's 1938 Institute of Science fits snugly behind the original building and down a sloping hillside. Approached from the parking area, Saarinen's building remains dominant in view. Only the 42-foot-tall entrance tower of Holl's massive addition is visible, standing to the rear and off to one side. While admirably modest, Holl's solution also makes one wonder whether he and Cranbrook held back a little here. Would it not have been possible to let the addition wrap around the older building or in some other way stake its own claim to our attention? Not offending the ghost of Saarinen—or Cranbrook's current and potential donors—seems to have been a major aesthetic concern.

Two overhead oculi provide natural light in the Williams and Tsien natatorium.



Then, too, the new natatorium subtly completes the vista from the Booths' home, the Albert Kahn–designed Cranbrook House, down past Saarinen's signature peristyle, an open-air, columned pavilion, to the previously vacant west end of the campus. Yet like Holl, Williams (a 1961 Cranbrook graduate) and Tsien weren't interested in making brash statements. The mostly unadorned face of the $10 million natatorium, a plum-colored brick with a running panel of blue and green bricks set in, captures the visual energy of the long vista but gives no clues to the nature of the interior.

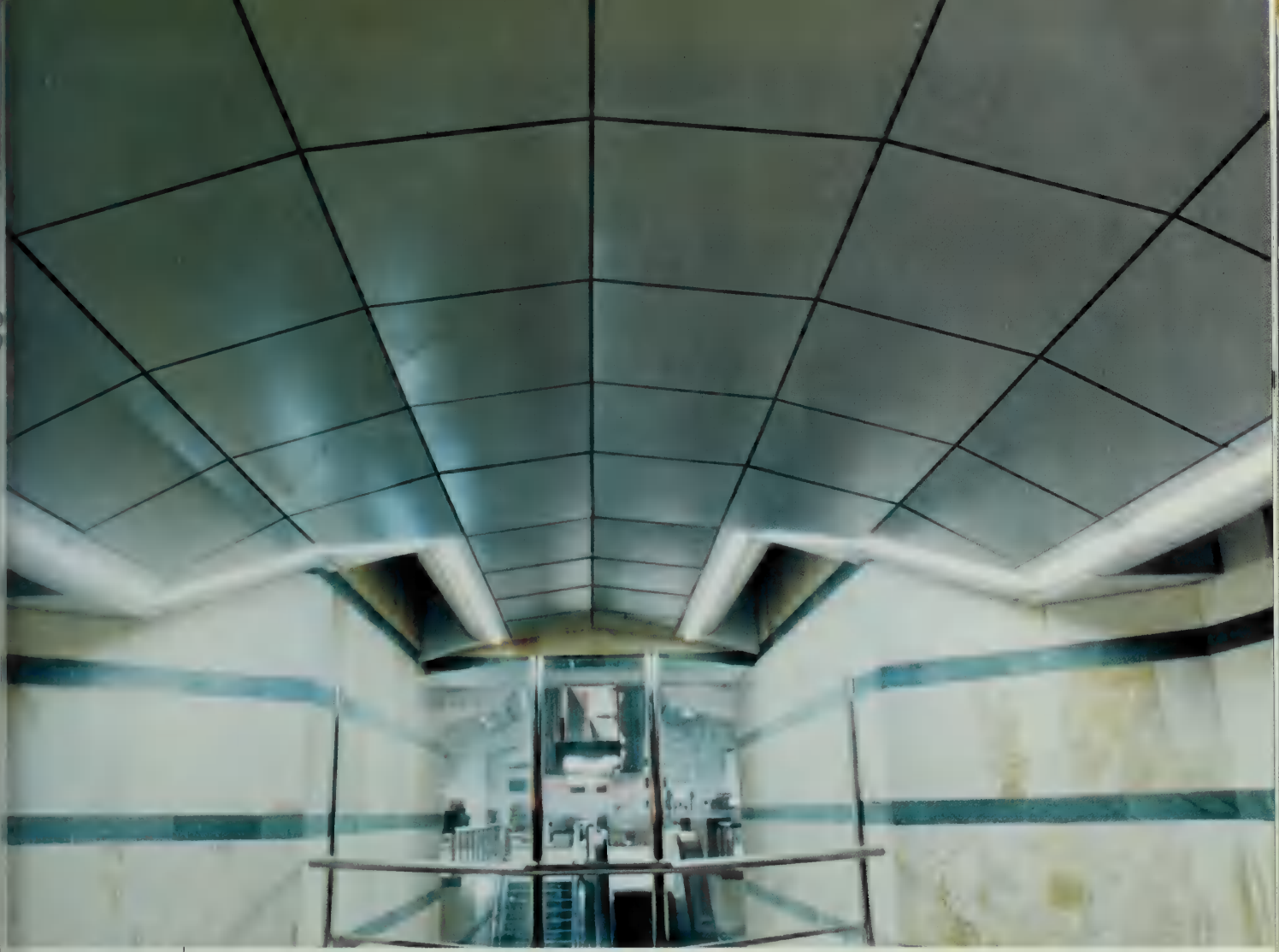
HOLL'S SOLUTION MAKES ONE WONDER WHETHER HE AND CRANBROOK HELD BACK A LITTLE HERE.

Moneo's design, just entering construction, seems to go the furthest in updating Cranbrook's personality. Even Moneo, while using materials somewhat at odds with Cranbrook's signature brick in various warm hues, expands Saarinen's vision without violating it. Moneo's studio spaces will include a three-story glass curtain wall, and the industrial-looking work space on the tail of the building will be clad in a zinc/titanium alloy skin, giving it a burnished pewter color.

The L-shaped Moneo addition will be built slightly lower than the peristyle and set back into Cranbrook's woods. It's an evolution, not a revolution.

Cranbrook's caretakers say they're delighted with the balance struck by their architects. "We are building on the Booth-Saarinen tradition of employing the finest architect and breaking new ground and serving new areas," says Dr. Robert Gavin, Bauder's successor and the current president. That may be so, but the new designs may represent the practical limits on what Cranbrook could have done given the expectations of donors, trustees, alumni, and the public.

If not set apart as big, showy signature statements, the interiors of the new buildings distinguish themselves through quiet excellence. Williams and Tsien's natatorium is the most remarkable of the new works. Two startling features were designed to help cool and ventilate it: a series of vertical baffles on the walls open to let breezes in, and two oversized oculi open to the sky. The light pattern on the ceiling has been left deliberately random to mimic a starry night. The pool surface flanks a glass curtain wall. Swimmers doing laps can thus



CEILING | SYSTEMS

[Between us, ideas become reality.™]

LET YOUR IMAGINATION SOAR.

If you can envision it, we can help make it happen. Introducing our new Architectural Specialties Group, a technically savvy service team that can collaborate with you in designing custom ceiling applications that will redefine the ceiling plane. And offer you all new visual options with Armstrong WoodWorks™ and MetalWorks™ specialty ceilings. Call us today at 1-888-207-2321 or visit www.ceilings.com. And find out how Armstrong can work with you to turn ideas into realities.

Armstrong

CIRCLE 36 ON INQUIRY CARD

measure their progress by watching the trees go by outside.

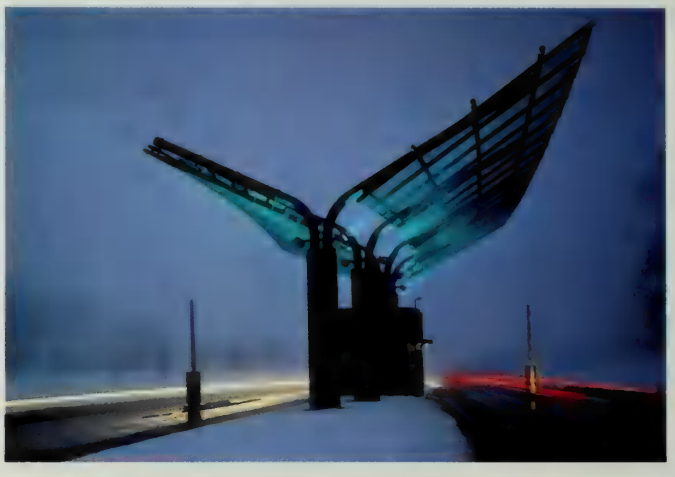
Clearly the smallest of the new projects, Hoffman's entrance has had the greatest visual impact on Cranbrook. Today, suburban sprawl has pushed well beyond Cranbrook, and the old entrance off a seldom-traveled byway called Lone Pine Road became too busy for comfort. So Cranbrook envisioned a new entrance off Woodward Avenue, the ceremonial main street of metropolitan Detroit, which runs along Cranbrook's eastern border. Hoffman's creation, a slim center cabin topped by uplifted wings, is too minimalist to redefine Cranbrook in any major way. But it does give the campus what it lacked—a clearly defined entry.

"In the end, every building is different, which is what we wanted," Hoffman says. "And every building in its own way interprets the architectural tradition of Cranbrook, which is also what we wanted."

The challenges won't end when Moneo's building is completed in 2002. Most important, perhaps, is the role of landscape architecture. Cranbrook has evolved into a much more public place, in part because of the success of the Institute of Science, which now draws hundreds of thousands of visitors a year. All the architectural challenges of making a private school more public involve landscape. Debate is under way now on parking, hydrology, drainage, and other factors that go into developing a sustainable landscape. "That's going to consume Cranbrook for the next 10 years," Hoffman says.

Today, Cranbrook remains the place that Saarinen created with the Booths' money and inspiration. That was no easy trick, and programmatically all the new additions work well. Cranbrook is a livelier place today, more in tune with the new century, and with a more supple identity thanks to the new additions.

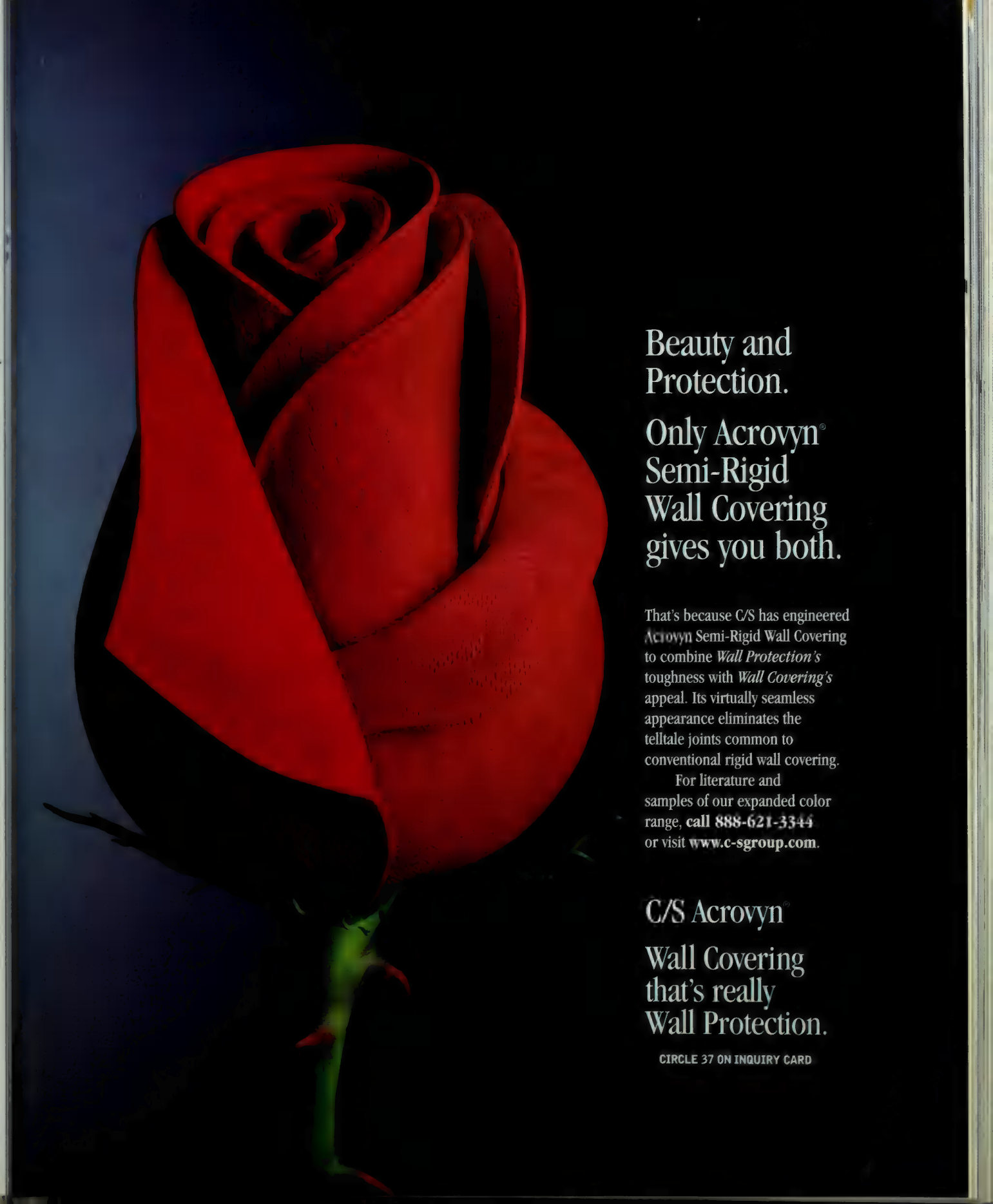
One can wish in vain that Cranbrook had let at least one of its architects try for a big, redefining statement, the I.M. Pei pyramid to the traditional Louvre. Setting up a vision rivaling its founding spirit is the one thing that Cranbrook would not or could not do. ■



Hoffman's entrance canopy of mesh and steel serves as a beacon.

THE SMALLEST OF THE NEW PROJECTS, HOFFMAN'S ENTRANCE HAS HAD THE GREATEST VISUAL IMPACT ON CRANBROOK.




Beauty and Protection.
Only Acrovyn® Semi-Rigid Wall Covering gives you both.
That's because C/S has engineered Acrovyn Semi-Rigid Wall Covering to combine *Wall Protection's* toughness with *Wall Covering's* appeal. Its virtually seamless appearance eliminates the telltale joints common to conventional rigid wall covering.
For literature and samples of our expanded color range, **call 888-621-3344** or visit **www.c-sgroup.com**.
C/S Acrovyn®
Wall Covering that's really Wall Protection.
CIRCLE 37 ON INQUIRY CARD

GREAT RENOVATIONS DESERVE GREAT DOORS



Building:
SEVERANCE HALL, CLEVELAND, OHIO

•

Design Architect:
DAVID M. SCHWARZ ARCHITECTURAL SERVICES

•

Architects-of-Record:
GSI ARCHITECTS, INC.,

•

Main Contractor:
PANZICA CONSTRUCTION COMPANY

•

Doors Specified:
CECO DOOR PRODUCTS



After its opening in 1931, Severance Hall soon became known as one of the finest concert facilities in America. The renovation project of 1998-2000 gave new life to a great building.

Great buildings deserve Ceco doors.

Ceco Door Products
A United Dominion Company

Proving our leadership . . . everyday!

CIRCLE 38 ON INQUIRY CARD

750 Old Hickory Boulevard • One Brentwood Commons, Suite 150 • Brentwood, TN 37027 • (615) 661-5030; FAX (615) 370-5299 • www.cecodoor.com

PSFS adaptive reuse illustrates preservation tax credits at work

Practice Matters

By Charles Linn, AIA

Although the U.S. Department of the Interior's Federal Historic Tax Incentives are not as generous as they once were, they can still play a key role in financing the kinds of extensive preservation efforts required of buildings, such as the Philadelphia Savings Fund Society (PSFS) [see page 136]. The credit, which equals 20 percent of the money spent on the certified rehabilitation of a certified historic structure, can equal millions of dollars when applied to a large building. The expenditures covered by the credit include construction costs, architectural and engineering fees, legal and development fees, and other construction-related expenses. It is worth noting that tax credits differ from tax deductions. A tax deduction lowers the building owner's taxable income; a tax credit is applied directly to the amount of income tax owed. For example, one dollar of tax credit reduces the amount of income tax owed by one dollar. The tax credits do not include new work; for example, in the case of PSFS, the tax credit did not apply to a new four-story addition.

The first step toward making any building eligible for the tax credit is listing it on the National Register of Historic Places. Arthur Jones, AIA, of Bower Lewis Thrower Architects, interior designer Karen Daroff of Daroff Design, and historic preservation consultant Robert Powers were in for a pleasant surprise when, in the course of doing research on PSFS, they learned that it was already on the register. "Apparently the Society put the building on the register years ago in order to take advantage of the tax credits when they were making repairs to the sign," says Jones, referring to the famous 27-foot-tall PSFS letters on top of the building, which have marked the Philadelphia skyline since 1932. This being the case, the designers were actually applying for a second round of credits, this time, to do rehabilitation work while converting the building from an office to a hotel. Buildings that are not on the register but are located within historic districts may be eligible for a tax credit, provided the historic significance of the building can be proved.

The second part of the certification process involves approval of plans for the rehabilitation, first by the State Historic Preservation Officer (SHPO) serving the state where the project is located, then by the National Park Service, which administers the program for the U.S. Department of the Interior.

In this phase, the architects and SHPO begin by establishing which areas and components of the building will be renovated and restored, supported by a complex application that includes photographs and drawings of the proposed work. Using these plans, officials can verify that the most important spaces in a building will be preserved and rehabilitated and that the proposed work will follow the Department of the Interior's Standards for Rehabilitation.

At PSFS, the most crucial spaces included the stair and escalator lobby at the building's Market Street entrance, which once led to the banking hall; the banking hall itself; and the elevator lobby off 12th Street, which formerly led to the office tower. Also included were the elevator lobbies on each of the former office floors, which are now guest-room floors,



A new canopy was one of the alterations allowed by the National Park Service so that the PSFS building could function as a hotel.

and the 33rd floor, which was once home to PSFS's boardroom and meeting rooms.

Changing the entire program of a building isn't easy. "The key was fitting the needs of the hotel around a building that used to be a bank and office building. And there were many spaces that had such a high degree of original historic integrity that we felt we had to preserve them," says Powell. Fortunately, the Park Service is realistic about this issue: if they don't permit certain alterations to the building fabric, a project might not proceed at all. For example, the stainless-steel canopy on Market Street is a new addition to the facade. Jones feels that it was allowed by the SHPO and Park Service because it was essential to the operation of the hotel. "They knew that a radical change of occupancy like this could not be made without some changes, and I think they respected that we were taking a responsible attitude toward the project and doing an elaborate restoration."

Another example of a significant alteration approved by the SHPO and Park Service for a space that had been deemed worthy of preservation was the lowering of the ceiling in the 12th Street elevator lobby. Originally, elevators did not stop on the second floor, where the banking hall was located. However, in transforming the building from bank to hotel, it was necessary to provide direct access from the guest rooms to the second-floor banking hall, which Daroff Design was changing into a ballroom.

To provide this access, the original ceiling of the elevator lobby had to be removed so a new floor could be installed there. The original coved ceiling was re-created in every detail beneath this new floor. Karen Daroff explains the importance of the Park Service's decision to allow this alternation: "If they had refused to permit us to do it, it would have killed the project.

I don't know any way we could have worked it out."

But there are some issues the Park Service is particularly concerned about. For example, windows in historic structures often need to be replaced, and the Park Service is particularly concerned that the replacements look exactly like the originals.

"The Park Service established years ago that inappropriate windows are the biggest bad actor in low-quality preservation work because of the temptation to use a standard window that doesn't match," notes Jones. In fact, he says the strictness of the Park Service's requirements often helps resolve pressure from the project developers to do the work on the cheap. All of the curtain wall at PSFS is made from custom-run, clear-anodized extruded aluminum. Most people remember the original window frames as being black; however, the non-anodized frames had actually oxidized over time. The banking hall windows were refitted in stainless steel, and although the storefront windows are now an aluminum system, stainless-steel snap-on covers were used to match what was once there. Even window glass, which was changed from single to double glazing, still appears as it did in period photographs.

PRESERVATION TAX CREDITS DO NOT PROTECT BUILDINGS PERMANENTLY. AFTER FIVE YEARS, ALTERATIONS CAN BE MADE.

The third and final phase of the tax-credit certification process occurs after construction is completed. The designers document that they have done everything described in the original application, and the Park Service inspects the building. If the plans have been followed, it is unlikely that the building would be rejected for tax-credit status at this point.

Next, the Park Service issues the owner a certificate of completed work, which is filed with the owner's income-tax return in the same year that the building is placed in service. To collect the tax credit, an owner files a copy of the certificate with his tax return. In accepting the tax credit, the owner must hold the building for five years or repay the tax credit. The certificate can also be revoked if the Park Service or state historic preservation officer inspects the building and finds that unauthorized alterations have been made to the rehabilitated areas.

Unfortunately, the tax-credit program does not provide permanent protection for historic buildings. After five years, owners are free to make any alternations they wish.

The Internal Revenue Service has a number of other rules that may affect whether an application for the historic preservation tax credit should even be attempted. For example, if a building cannot be depreciated, that is, if it cannot be used for the production of income, it would not be eligible. Other rules address whether a building will be altered in phases, as well as whether the amount of money invested in the building exceeds either $5,000 or the adjusted basis of the building.

This may sound complicated, but Department of the Interior guidelines, which are available at www2.cr.nps.gov/tps/tax/brochure2.htm, explain the requirements in a clear, straightforward manner. A good accountant and preservation consultant will help make looking at the options even easier. ■

The Concern For Fire Safety In Commercial Structures.



One Answer is PYRO-GUARD® Interior Fire Retardant Treated Wood.

PYRO-GUARD has a low rate of fuel contribution and heat release, and it maintains *structural integrity* longer than other building materials such as steel. Consequently, fire damages and repair costs are minimized, resulting in reduced insurance rates.

- Recognized by all building codes.
- Reduces flamespread from Class C to 25 or less (Class A).
- Pressure impregnated for uniform protection.
- In-plant third party quality control.
- Each piece is UL labeled.

PYRO-GUARD®
FIRE RETARDANT TREATED WOOD

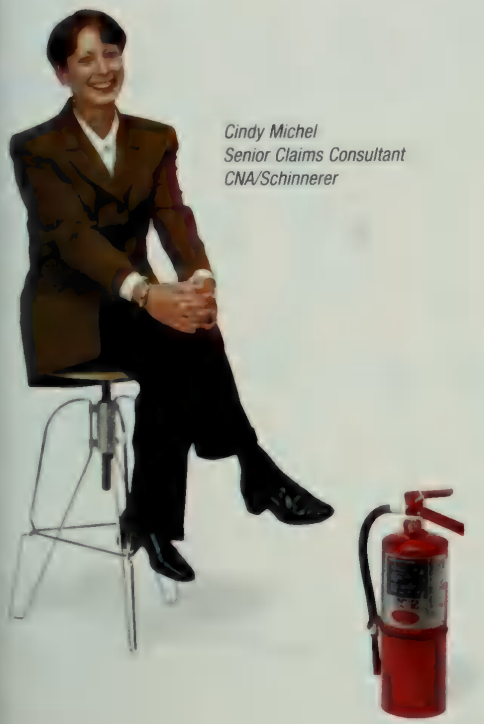
Hoover Treated Wood Products, Inc. • P. O. Box 746 • Thomson, GA 30824

For Technical Information Call: 1-800-TEC-WOOD

http://www.FRTW.com • E-mail hoover@frtw.com • Fax: (706) 595-1326

CIRCLE 39 ON INQUIRY CARD

I may not drive a red truck, but you can still count on me to put out your fires.



Cindy Michel
Senior Claims Consultant
CNA/Schinnerer

You probably never thought of your professional liability claims rep as a firefighter. But that's exactly what I do. Whether it's a big blaze or just a little spark, I'm only a phone call away. Recently I was able to work with an insured on a design problem that was discovered early on. We got together with all the parties involved and were able to address the issue and agree on a resolution before it became a major problem. The entire process took only three weeks. My 24 years of experience make it easier for me to understand situations and help everyone reach the best possible solution. That way, everyone can get back to work. It's just one more reason why CNA/Schinnerer is the right choice for you.

This advertisement is for illustrative purposes and is not a contract. It is intended to provide only a general overview of the services and products offered. Only your policy can provide terms, coverages, amounts, conditions and exclusions. CNA is a registered service mark, domain name and trade name of CNA Financial Corporation. This program is underwritten by Continental Casualty Company, a CNA company, and is managed by Victor O. Schinnerer & Company. All coverages not available in all states. © CNA Financial Corporation. All rights reserved.

To learn more about our programs and services fax the following information to 301-951-5444:

Name: _____

Address: _____

City: _____ State: _____

Zip: _____ Phone: _____

E-mail address: _____

Or e-mail us at info@schinnerer.com
or call 301-951-9746
or visit www.schinnerer.com

Victor O. Schinnerer & Company, Inc.

CIRCLE 40 ON INQUIRY CARD

CNA PRO



SLEEK LINES SUBTLE CURVES AND GRACEFUL NEO CLASSIC ARCHES

MAKE SURE THEY BUILD IT THE WAY YOU DESIGNED IT.

buzzsaw.com™
an Autodesk® venture

Set up a personalized project site on Buzzsaw.com's secure servers and get your whole team working together in a matter of minutes. Register the members you want with the permission level you choose, and use your central workspace to track decisions and changes throughout the project lifespan. From design collaboration, to bidding and buying, to construction management, it's all in a day's work at Buzzsaw.com.

CIRCLE 41 ON INQUIRY CARD

In Europe, competitions help elevate young practices

Critique

By David Cohn

Despite their drawbacks, design competitions deservedly play a vital role in architecture around the world. Competitions bring new architects into the limelight and consolidate the prestige of rising figures. The professional press is studded with spectacular competition-winning projects, from the Reichstag in Berlin to London's Tate Modern to the Alexandria Library in Egypt. In Europe design competitions have become the standard method for awarding public commissions, and their use is growing in the private sector as well. France, Germany, and Spain have laws requiring competitions for all public projects. In France alone, there are over 2,000 competitions annually, according to François Barré, head of France's Department of Architecture and Patrimony.

Outside the norm in U.S.

While the competition process has been adopted in Europe and elsewhere with little debate, it remains outside the norm in the United States, although some significant projects, such as the Nelson-Atkins Museum in Kansas City, have been awarded through competitions. To examine the competition system in the U.S. and abroad, I talked to several architects with extensive competition experience from both sides of the Atlantic.

Spanish architect Juan Navarro Baldeweg, designer of the Mahón Courthouse in Minorca [MAY 1999, page 196] and the Princeton Music Library, favors competitions as a way of promoting design excellence. He says clients sponsor them because "they identify with the idea of an architecture of quality." He also believes competitions bring out the best in a designer. "Nature has given us a competitive spirit," he says. "The tension of competing seems to produce bolder, more risk-taking ideas. You work harder, with greater inspiration. You take the plunge."

Lee Polisano, FAIA, director of the London office of Kohn Pedersen Fox (KPF), agrees. When KPF opened its British office, it had little work, no client base, and no practice specialty. KPF used competitions to help build its London practice and create relationships in Europe, especially with local authorities. Polisano says his firm uses competitions to test new ideas and train staff. "It's a good discipline," he says. "For young firms, the historic route to success in Europe is through competitions."

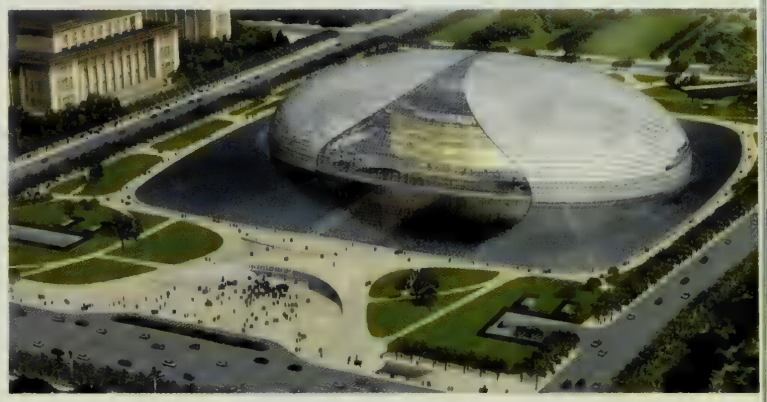
Lack of client interaction

In the opposing camp is Larry Oltmanns, AIA, design director of Skidmore, Owings & Merrill's London office. "The basic issue," he maintains, "is that the competition format precludes a client-architect relationship and interaction from the start of the project, which is key to good design. It's important to work with sponsors and users—the people close to the project's aspirations."

Oltmanns' most damaging point regarding competitions is that they place clients in a subservient role. "Clients don't determine the outcome," he points out. "As a result, clients very often try to undermine the process or go around it." The users and sponsor, Oltmanns contends, are forced to live with a scheme that is cast in stone, and the winning architect, sensing his approach validated by the jury, is less inclined to adapt his scheme to the client's needs.

Oltmanns' argument underlines basic differences between the service-oriented approach of America's large corporate firms and the more artistic or craftsmanlike approach of most European architects. He describes the American architect's role as opening up a world of possibilities to clients and helping them choose the best way to go. "The key to great architecture is how a scheme develops and evolves," he points out. "It's unrealistic to expect that to occur in a competition."

For Juan Navarro Baldeweg, on the other hand, the creative process is a solitary mediation, not a team effort. "Great ideas need time. They are developed in solitude. Then you adapt them to the circumstances." Navarro also points out that public projects in Europe often lack an obvious client with whom to interact. "Clients change. Frequently there is no program."



Paul Andreu's competition-winning design for the National Theater in Beijing.

In response to the problems Oltmanns cites, some recent competitions have sought to encourage a dialogue between winners and clients rather than seeking a finished building proposal. In the 1998 Scottish Parliament competition, Polisano recalls, the first phase was idea- and process-based: "How would you work with them? How you would proceed?" The winner, the late Spanish architect Enric Miralles, told me at the time, "We based our strategy on learning from the client conversations we had. We offered a dialogue more than a

David Cohn is RECORD's Madrid-based correspondent and the author of Young Spanish Architects.

solution. This helped them feel more comfortable working with us."

Competition standards vary. The International Union of Architects (UIA) administers UNESCO standards for international competitions, and their sponsorship assures that certain basic fairness practices are followed, such as the appointment of an UIA-approved jury with a majority of foreign-based architects (*see* www.uia-architectes.org). The European Union and individual countries have their own rules for competitions.

Standards not universal

But standards are not universally applied. Oltmanns maintains that fairness standards are not always a guarantee. In Germany, he contends, juries are almost always made up of German architects. "The fraternity is very tight—it is not a level playing field."

One recent controversy concerns the competition for the National Theater in Beijing, won by French architect Paul Andreu. The process, and Andreu's design, have caused a fierce debate among Chinese architects. Beijing-based P. K. Alfred Peng, for one, charges that the French government applied political pressure to influence the outcome.

Arthur Erickson, chair of the jury for the National Theater, says, "No competition in China is carried out to architectural standards in my experience. The government projects I am familiar with demand that three finalists are proposed to the government. Therefore, there is ample opportunity for politics to intervene. I am appalled to see the final French entry and agree with the outcry it has caused. But since it was among the three chosen by the jury, it is legal, though painful!"

Eileen Quinn, the UIA's spokesperson in Paris, said the UIA encourages large, open international competitions, because they attract international attention and prestige to a project and offer opportunities for younger architects. However, none of the architects I spoke with are in favor of this type of competition. As Oswald Grube wrote in a letter in RECORD [JULY 2000, page 20], "The vast field of entrants does not allow for a qualified selection process by the jury, and the best firms most often don't bother to participate."

Young practices flourish

Navarro sees a role for open competitions in projects with "generic but well-defined programs, where it is more difficult to make mistakes." He cites the EUROPAN competitions, which are sponsored by the European Community and which award public-housing projects to beginning architects. These and similar events have allowed young practices to flourish and have helped revitalize the European design scene. "But in projects with complex and important issues at stake, a limited competition is better," says Navarro. He is also against competitions run in two stages, which are favored by the UIA. "A good jury can see the most promising project in the first phase. And that's when you take the biggest risks. In the second stage, you're more conservative, because you think you are close to the prize."

Competitions are, of course, risky and expensive. Though all the architects I spoke with participate only in invited and paid events, "The stipend never covers our expenses," Polisano explains.

Navarro warns of the decline in the quality of competitions when, as in Spain, they are rigidly applied to every public project. "The law becomes an obstacle, giving rise to corruption and illegal procedures." He also notes a decline in the quality of juries. In the past, a jury's architects set the criteria. "Now people who know nothing about architecture often determine the outcome," says Navarro. ■

FIREPROOFING WORTH THE LOOK!

A/D FIREFILM® II

Decorative Thin-Film Fire Resistive Coating for Structural Steel

A/D FIREFILM® II combines ratings up to 3 hours with the appearance of exposed steel.



Photo: Sacramento International Airport, Terminal A
Architect: Dreyfuss & Blackford Architects
Photo: Cathy Kelly Architectural Photography
A/D FIREFILM® II on structural steel.

A/D FIRE PROTECTION SYSTEMS

Call 1-800-263-4087

CIRCLE 42 ON INQUIRY CARD



WHY LAS VEGAS HILTON'S SPACE QUEST CASINO RELIES ON SLOAN FAUCETS AND FLUSHOMETERS

When you're transported to the 24th century, manual flush valves and faucets just won't do.

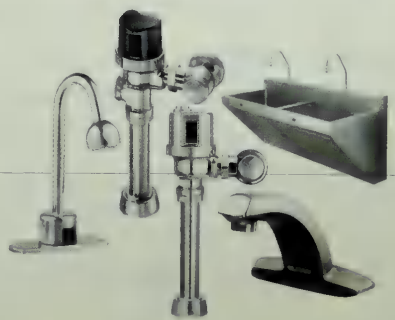
The Las Vegas Hilton's Space Quest Casino needed fixtures to reflect that modern technology. They chose SLOAN'S ADA compliant Optima Plus® Flushometers and Optima® ETF-80 faucets for their restrooms to add style without sacrificing performance. The recently opened entertainment center chose Sloan Optima Plus Flushometers to integrate time-tested hydromechanics and modern electronics. Sloan's Perfect Sense® EL-1500 Optima sensor utilizes advanced electronics that adjust automatically to surroundings and changing conditions. Sloan's Optima Plus Flushometers have their own LED diagnostics. The Optima's Sentinel® system is electronically programmed to automatically flush after 24 hours of non-use, ensuring fresher restrooms and reducing corrosive buildup.

Sloan blends state-of-the-art electronics, timeless craftmanship and styling in Hilton's ultra-modern restroom to orchestrate both form and function.

For example, Sloan's Optima ETF-80 hygienic and automatic faucets use infrared technology to sense a user's hands and automatically adjust to changing environments. Plus, the new sleek, sophisticated design and contemporary styling elevates the standard for elegance.

IF THE 24th CENTURY RELIES ON SLOAN, SHOULDN'T YOU?...Call today!

Learn why entertainment centers choose the performance of Sloan. Call **800-745-0800,** or circle the number below for a copy of our full-line catalog/CD-ROM.



SLOAN®

Sloan Valve Company
10500 Seymour Avenue • Franklin Park, IL 60131
Phone: 800-745-0800 • Fax: 800-447-8329
www.sloanvalve.com

CIRCLE 43 ON INQUIRY CARD



Products:
EFCO Series 890 Casement and Fixed, Series 3500 Horizontal Sliding, Series 3900 Fixed Thermal Windows

Building:
The Strathmore,
New York, New York

Architect:
Costas Kondylis

Erector:
K & M Architectural Window Products

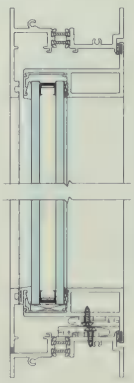
EFFICIENT

LOOK TO EFCO® FOR EFFICIENT WAYS TO SAVE ON ENERGY COSTS.

Now you can upgrade your windows with the money you'll save in utility costs. Look to EFCO for the expertise you'll need to implement a complete glazing and fenestration energy program that leverages your utilities savings.

As a major Division 8 manufacturer, EFCO has energy efficient products, as well as years of experience in performance testing and analysis for U-values, shading coefficients, and daylighting.

Whether new construction or retrofit, EFCO thermal windows will help you achieve the most efficient building envelope possible. Our thermal windows come in two types of barriers: fill-and-debridge or Insulbar® two-piece construction, which allows a different finish on the interior and exterior. Insulated glass units are standard glazing. For extra energy savings, choose triple glazing or Heat Mirror™.





Get EFCO involved with your energy consultant early in the project for your most effective energy plan. Or let EFCO help you find the consultant that's right for you. Contact your EFCO representative, call EFCO direct at 1-800-221-4169, or visit our Web site at www.efcocorp.com.

CIRCLE 44 ON INQUIRY CARD

EFCO®

WINDOWS
CURTAIN WALLS
ENTRANCES
STOREFRONTS

Insulbar® is a registered trademark of Ensigner Inc.

Heat Mirror™ is a trademark of Southwall Technologies.

©1998 EFCO Corporation

The powers of ten: Hanging out with the hot young things of the design scene

Books

By Clifford A. Pearson

10 x 10: 10 Curators/Critics, 100 Architects. *London/New York: Phaidon Press, 2000, 468 pages, $60.*

If you're wondering who's part of this year's "in" crowd, look no further than *10 x 10*. This big striking book presents a hundred hot young architects from around the world who have made it onto a VIP party list compiled by 10 different architectural opinion makers.

The emphasis here is on emerging voices. So you won't find any of those British architects with "lord" attached to their names or anyone who has won a Pritzker Prize. As Vivian Constantinopoulos explains in her short preface, *10 x 10* is "an overview of work by architects among whom are those setting the pace for the future . . . architects whose work is only now gaining recognition on an international platform."

A few of the players are hardly debutants—Will Bruder, Denton Corker Marshall, Hodgetts + Fung, and Enrique Norten, for example, have been extensively published for years—but most are indeed fresh blood. Firms such as Abalos + Herreros from Spain, Atelier Hitoshi Abe in Japan, Christian de Groote in Chile, and Sanaksenaho Architects in Finland are not yet household names.

Such a focus on up-and-comers is both a strength and a weakness. Discovering new talent is always exciting, and there's a lot to appreciate in this book. Firms such as Stutchbury Pape and Wood/Marsh of Australia, Souto Moura of Portugal, and AMP Arquitectos of Spain will probably be pleasant surprises to most American readers, although they are well established in their own countries. But other firms come across as not-ready-for-prime-time talent. Some of these may in fact become important architects in the next decade or so; others will probably fade as quickly as last season's hemline.

Each firm gets exactly four pages to strut its stuff, and most of them present two or three projects. A short text written by one of the 10 critics accompanies the work of each firm. Images are packed tightly on each spread and the reader gets the feeling of moving through the crowd at a very popular party. It's not always comfortable, but would you really want to spend much time at an event that isn't packed?

The critics—Haig Beck + Jackie Cooper from Australia, Aaron Betsky and Terence Riley from the U.S., Roger Connah from Sweden, Kristin Feireiss from Holland, Jorge Glusberg from Argentina, Tokyo-based Tom Heneghan, Mohsen Mostafavi and Neil Spiller from the U.K., and Jaime Salazar from Spain—selected architects from around the world. The result is a relatively balanced geographic mix of featured designers. South Asia and southeast Asia get short shrift, though, with only one firm from India and none from Malaysia, Singapore, Indonesia, or Thailand, where architects such as Jimmy Lim, Ken Yeang, and Chan Soo Khian are doing interesting work.

Each critic also offers a short essay in the back of the book to explain his or her selection process and a list of 10 references, such as books, films, themes, and cultural figures. The references turn out to be more interesting than the sometimes muddled selection criteria used by the critics. It's intriguing to see literary figures such as Gabriel García Márquez, Marcel Proust, David Mamet, and Octavio Paz appear on the same lists as the F14 jet fighter, Issey Miyake, Daniel Libeskind, and AWN Pugin. Some of the name-dropping gets a bit incestuous, with one critic citing *UME* magazine, which happens to be published by two of the other critics, and with Greg Lynn making an appearance as both a featured architect and a reference. But that's part of the fun of these sorts of affairs.

One of the book's best examples of design is the book itself. As designed by Julia Hasting, *10 x 10* is a 12x12-inch volume that uses blocks of contrasting colors (orange, black, yellow, and white) and blocks of texts to create bold compositions that delight the eye while organizing the material into instantly understandable pieces. The effect is anything but square. And its translucent white cover, with layers of black and orange type that emerge and recede depending on the position of the reader's eye, is one of the sharpest to hit bookstores in years.



Young Spanish Architects, *by David Cohn. Basel: Birkhäuser, 2000, 144 pages, $50.*

Following the explosion of architectural talent that caught international attention at the 1992 Barcelona Olympics and Seville World's Fair, a new generation of Spanish architects is beginning to exercise its muscles. Lean, taut, and unadorned, the work of Spanish architects under the age of 40 tends to embody a modernism with little or no fat. Fourteen of these firms are featured in *Young Spanish*

Architects, part of a series that includes books on young German, Italian, Swiss, and French architects.

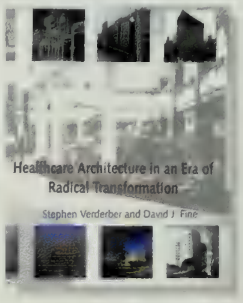
David Cohn, who is RECORD's Madrid-based correspondent and a contributor to several European publications, provides an excellent overview of the architectural landscape in Spain today. His opening essay places the latest generation of architects within the context of design in the post-Franco (after 1975) era. He explains how firms such as Mansilla + Tuñón, María Fraile & Javier Revillo, and Rafael Aranda, Carme Pigem & Ramón Vilalta differ from one another and from their immediate predecessors, such as Rafael Moneo, Esteve Bonnell, and Juan Navarro. Cohn then presents a few projects from each firm.

The book includes both color and black-and-white photographs and a good selection of drawings.

Healthcare Architecture in an Era of Radical Transformation, *by Stephen Verderber and David J. Fine. New Haven: Yale University Press, 2000, 416 pages, $55.*

Healthcare was one of the dominant social and political issues of the 1990s and is once again in the news as candidates discuss Medicaid reform and prescription drug benefits. But healthcare design is seldom discussed in general architectural discourse. The paucity of coverage perhaps reflects the often dreary image that hospitals have acquired since World War II. When the Getty Center opened, for instance, critic Robert Campbell's most stinging criticism was that it looked like a hospital.

This situation is partially due to the enormous expense and technical complexity of most hospital projects. But, as Stephen Verderber and David Fine report in *Healthcare Architecture in an Era of Radical Transformation*, the hospital itself may be receding as the center of American healthcare. To judge from their examples, however, this may not be a bad thing. The book, a self-styled sequel to John Thompson and Grace Goldin's 1975 classic, *The Hospital: A Social and Architectural History*, offers a sweeping and thorough overview of "health architecture" since 1960. Verderber and Fine start with the modern "mega-hospital" and go on to discuss the smaller, more community-based clinics and retirement communities that have emerged around it.



Generously illustrated with drawings and photographs, the book places these developments in a comprehensive historical framework, surveying changes in both the healthcare industry and architectural practice. The authors wisely examine projects from around the world, providing perspective to a practice area that sometimes seems a world unto itself. And like everything published today, the book includes a brief discussion of the impact of the Internet revolution.

Some scholars may consider Verderber and Fine's interpretation of recent architectural history simplistic at times, but their attempt at reaching an audience of hospital administrators and designers alike pays off in a lucid and nuanced narrative. And with a topic encompassing both architecture and healthcare, anything that lowers the academic jargon quotient is welcome.

Reviewed by Eric Fang

Eric Fang is an architect and urban designer at Beyer Blinder Belle in New York City.

Rolling doors that make a statement

Cornell's new Graphic Doors put bold, durable images up front



Durable full-color images applied to rolling door curtains create a whole new set of options for thoughtful treatment of exterior and interior openings.

— Reinforce **corporate image** with people and projects.

— Create a billboard to **advertise** products and services.

— Salute communities with scenes that evoke recognition and **pride.**

— **Fool the eye** by bringing country lanes to the city, seascapes to the prairies.

Graphics can be applied to rolling doors and rolling counter door curtains and hoods. For literature, guidelines and limits, or consultative design support, please use **toll-free** access via telephone, fax, or e-mail.

Rolling door specialists

CORNELL IRON WORKS

New solutions. Since 1828.™

Visit our interactive website for downloadable AutoCAD drawings, specifications in CSI MasterFormat™, and more

www.cornelliron.com

Tel: 800.233.8366, ext. 551, 641
Fax: 800.526.0841
E-mail: cornell@cornelliron.com

AIA/CES Earn credits attending Cornell's free ROLLING CLOSURE PRODUCTS program.
Contact Michael Simon at Cornell for scheduling.

CIRCLE 45 ON INQUIRY CARD

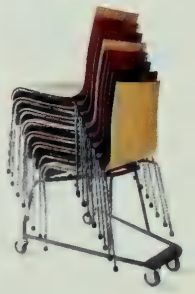
Great Modern Design...
Yours in Ten Days.

Why wait months for designer furniture? Now you can get modern designs like this Compasso d'Oro chair by Italian designer Enrico Franzolini in a matter of days from Design Within Reach. Call to order this beautifully crafted beechwood chair or ask for a copy of our latest catalog featuring 84 pages of modern design furniture and many exclusive discoveries.

Call for Our Catalog at 1.800.944.2233



Winner of the prestigious Compasso d'Oro prize at the 1998 Milan Triennale. Stackable.



Compasso d'Oro

0008 Chrome-plated steel frame; molded beechwood seat. Available in natural, mahogany, black and now in gray or red felt.

$195 - $295

We deliver most items in 10 days, but due to occasional large orders, 10-day delivery cannot be guaranteed.

DESIGN WITHIN REACH

RA061000

www.dwr.com 1.800.944.2233

IN STOCK • ONLINE • RAPID DELIVERY 455 JACKSON STREET SAN FRANCISCO, CALIFORNIA 94111

CIRCLE 46 ON INQUIRY CARD

NOW, A DESIGN FREEDOM THAT PRECAST CAN'T OFFER



New. Formawall® Dimension Series® architectural metal panels.

Wide color selection that makes precast look drab. Why settle for gray when you can have all the colors of the rainbow? Tough, weathertight CENTRIA Dimension Series panels are available in our Colorstorm™ palette of more than 100 standard colors. With Dimension Series panels, you can choose virtually any color you want for your designs — from conservative, subdued earthtones to bright, vibrant, grab-you-by-the lapel hues that demand attention. The panels are attractive and weathertight, and they come in varying thicknesses, profiles and reveals, offering you exceptional design freedom. And we offer a number of finish options to match your budget as well as your application. Don't cast your plans in concrete, start adding a new Dimension to your design. Contact CENTRIA today for a colorful personal presentation. **Quit stonewalling. You've settled for precast long enough.**

CENTRIA

CENTRIA Architectural Systems

DIMENSION SERIES Product of the Millennium As selected by Architectural Record

1 . 8 0 0 . 7 5 2 . 0 5 4 9

www.centria.com

CIRCLE 47 ON INQUIRY CARD

Finding the roots of Modernism and multicultural cities in central Europe

Exhibitions

By Clifford A. Pearson

Shaping the Great City: Modern Architecture in Central Europe, 1890–1937. *Curated by Eve Blau, Dieter Bogner, and Monika Platzer. At the Canadian Centre for Architecture, Montreal (until October 15), the J. Paul Getty Museum, Los Angeles (February 20, 2000–May 13, 2001), and the Kunstforum Wien, Vienna (June 6–August 28, 2001).*

Competing forces of centralization and fragmentation pull the cities of central Europe in two directions simultaneously. While beacons of shared ideals still shine, a resurgent nationalism excites some of the region's most powerful players. An empire collapses. Sound like current events? Actually, it's history.

Around the turn of the last century, right before and after the Austro-Hungarian Empire dissolved in the ashes of World War I, architects and planners laid the foundations for the modern city in such places as Vienna, Budapest, Prague, Krakow, and Zagreb. Today, in the wake of the Soviet empire's disintegration, these same cities are once again trying (and in some cases, failing) to balance the opposing forces of globalism and ethnic identity.

Shaping the Great City, which debuted at the Municipal House in Prague at the end of last year, tackles these big issues and sprawls across a great swath of geography. It's the kind of ambitious, intellectually challenging exhibition that few museums attempt to mount these days. It took eight years to research, required the cooperation of scholars and politicians in nearly a dozen countries, and pulled together some 400 architectural drawings and models, photographs, posters, books, and archival film clips. It's a lot to digest, probably too much.

But if you're willing to dig in, this show has some rich rewards. By focusing on central European cities just as they were entering critical stages of industrial growth and cultural ferment, the exhibition recaptures a particularly dynamic time. And it offers windows on urban places ranging from the regional powerhouse, Vienna, to such national capitals as Budapest and Prague, to smaller but still vibrant provincial cities, including Brno and Zlín, in what is now the Czech Republic, L'viv in the Ukraine, and Ljubljana in Slovenia.

Arenas of public culture

The exhibition "invites considerations of questions that are as crucial to our time and place as they were to central Europe a century ago," states Eve Blau, one of the curators. "How does architecture generate public meanings within a society of cultural differences and competing political agendas? How do cities, as arenas of public culture, shape the evolution of architecture? These questions continue to resonate today, as the world's great cities develop in our age of globalization," says Blau.

Some visitors might wonder what an exhibition on central European urbanism is doing in Montreal. But the CCA's trove of Mies van der Rohe drawings and its connections to the German-speaking academy make the venue a logical one. Most important, the CCA is a bilingual institution committed to exploring the meaning of modernism in a multicultural world.

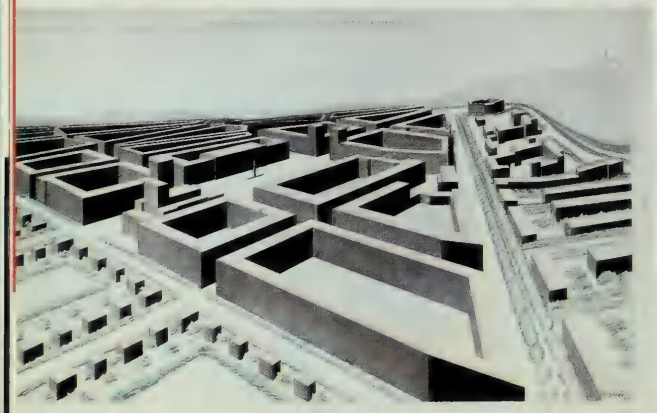
The show is organized into two main sections: "The City as Form and Idea," and "Modernity and Place." The first examines the patterns of city building in the Habsburg empire at the turn of the 20th century. Starting with Otto Wagner's unexecuted 1892–93 plan for Vienna, this portion of the exhibition shows how architects,

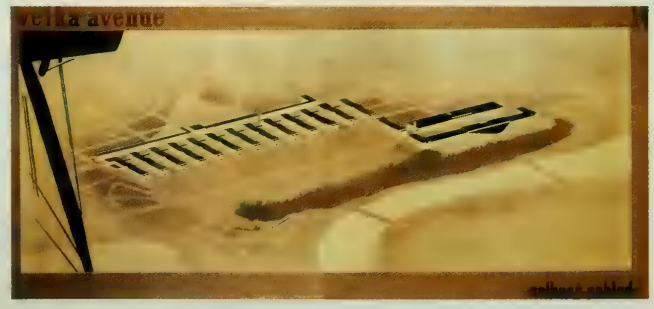




In an 1897 drawing of the Aspernplatz in Vienna (top), Otto Wagner depicted his idea of the city as a place of diverse neighborhoods. A 1921 set design by Vlastislav Hofman (above) brought an urban sensibility to the stage.







Three images of Czech Modernism: ■ 1929 poster by Ladislav Sutnar (top), ■ development plan from 1925–28 for the town of Hradec Králové by Josef Gocár (middle), and a new governmental district on the Letná Plain in Prague (1928) by Jaromir Krejcar (bottom).

engineers, and politicians brought different approaches to the challenges of urban growth and transformation.

While engineers saw the city as a two-dimensional grid that could be extended indefinitely, architects such as Wagner and Camillo Sitte envisioned it as a more complex, three-dimensional mechanism with mixed-use neighborhoods forming pieces of an integrated whole. In 1911 Wagner published his city-planning ideas in Europe under the title *Die Groszstadt* (the metropolis). His article "The Development of a Great City," which appeared in ARCHITECTURAL RECORD in May 1912, introduced his urban concepts to an American audience.

After World War I, planners in central Europe reacted against the capitalist underpinnings of Wagner's and Sitte's work and drew inspiration instead from Le Corbusier and Ludwig Hilberseimer. Such results included Farkas Molnar's KURI (Constructive, Utilitarian, Rational, International) City and socialist efforts from 1923 to 1934 to build a "Red Vienna."

The second section of the show looks at a range of cities throughout the region, focusing on the particulars of time and place, rather than the commonalities of ideas and approaches. Here we see how architects in Budapest, for example, looked to Hungarian folk traditions in connecting the modern with the indigenous, while in Prague architects carved out a modern identity by borrowing the forms of Cubism.

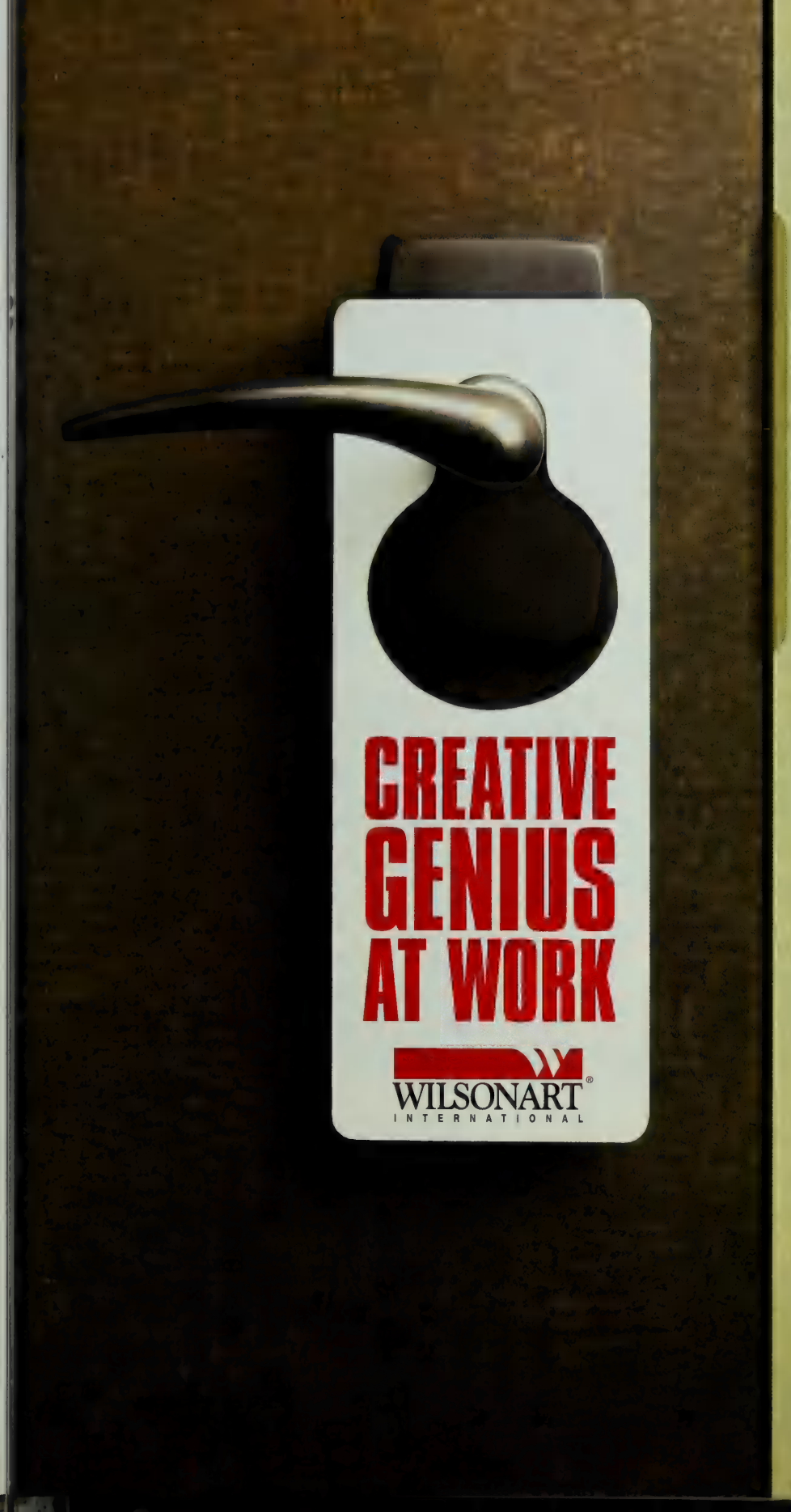
The show's drawings, many of which became available only after the fall of Communism, are often remarkable. A perspective by Maks Fabiani for a monumental square in Ljubljana (1899), for example, is a lyrical Art Nouveau–tinged drawing, while an aerial view of a governmental district for Prague (1928) by Jaromír Krejcar captures the Constructivist spirit of the day. Newsreel clips of street scenes play on television monitors in various parts of the exhibit, adding an evocative layer of documentation.

A third section of the exhibition, "Ideas for a New World," shows schemes from countries that rose from the collapse of Habsburg rule. Installed in the CCA's octagonal gallery, this piece feels disconnected from the rest of the show, almost an afterthought.

The exhibition was designed by Coop Himmelb(l)au, which created a kind of late-20th-century metal scaffolding in each room. While some drawings hang on the walls, others, along with accompanying text, photographs, and TV monitors, are attached to the scaffolding. The metal framework, with transparent panels holding drawings and images, allows visitors to look through one piece of the show to another, creating some interesting juxtapositions and vistas. The idea was to recall the busy streets of eastern European cities, but the installation makes the galleries feel cramped and narrow.

With its hyperkinetic architecture, the Austrian firm of Coop Himmelb(l)au is an intriguing choice to design the exhibition. Some of the firm's best work makes radical connections between staid old Vienna and a new era of technological leaps. Coop Himmelb(l)au's Wolf Prix, Helmut Swiczinsky, and Frank Stepper, however, seem reserved in the tight spaces at the CCA. Perhaps their design had more room to breathe in Prague.

Shaping the Great City is not a blockbuster show. It requires visitors to read, look, learn some history, and think about vowel-deprived places like Brno and Zlín. But by shedding light on how multicultural cities developed at a critical time and place, it helps us understand some of the opportunities and dangers for our own cities today. It also reminds us of the valuable role that institutions such as the CCA play in a museum world too often dominated by the need to attract bigger and bigger crowds. ■



You're a smart one. Always open to the latest in design solutions.

Like our new Architectural Door Collection. These 50 distinctive designs marry all the best features of Wilsonart® Laminate – durability and ease of maintenance – with the latest advances in design, printing and finish technology.

The result is an incredible series of laminates that, more than any other material, give your projects the performance features you demand and the aesthetics you desire.

To express your creative genius, call 1-800-433-3222 and ask for the Architectural Door Sample Kit.

CIRCLE 49 ON INQUIRY CARD

Pattern shown: Windswept Bronze (4794-60)



CARPET THAT RESOLVES THE CLASSIC DILEMMA.

Great design and meeting your client's budget are not mutually exclusive. J&J Commercial expands your creative choices with beautiful carpet in a multitude of patterns and colors. And because it's J&J, you can trust that it will perform to the most demanding standards: your clients. No other carpet resolves the classic dilemma between making a statement and meeting the budget so beautifully.

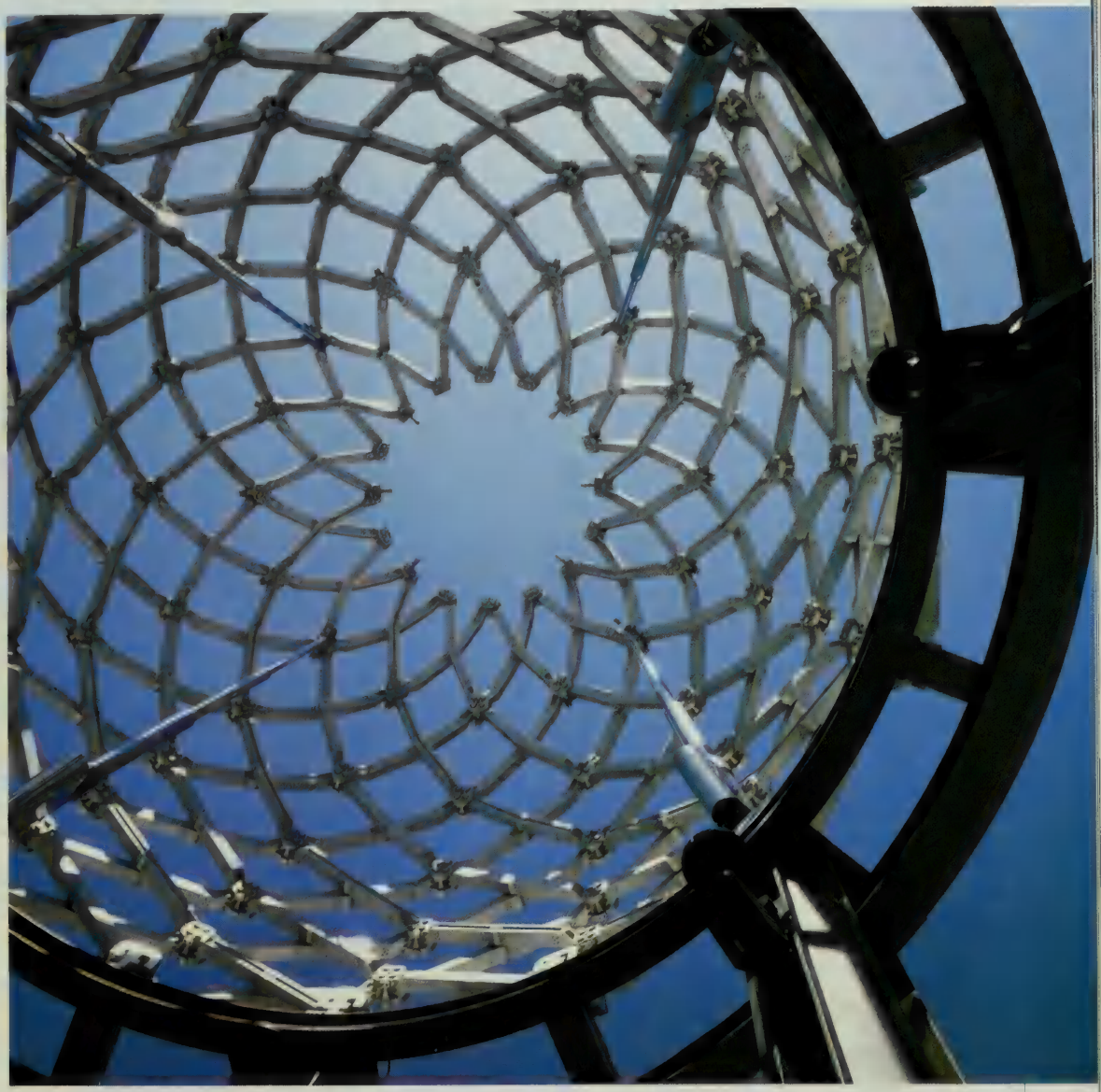
J&J COMMERCIAL

Carpet for spaces that work.

CIRCLE 50 ON INQUIRY CARD

800.241.4585 - www.jjcommercial.com

Snapshot



By Ingrid Whitehead

Steel mesh and engineering wizardry unfold into a dome

A giant, pulsating metal-mesh doily, the Retractable Dome at the German Pavilion at Expo 2000 in Hannover, Germany, is a mechanical masterpiece. Conceived by physicist Werner Lorke and designed by inventor and mechanical engineer Charles Hoberman, the dome is part of an exhibit celebrating the reconstruction of the legendary Frauenkirche Cathedral, which was destroyed during World War II. The structural members are made of a high-quality aluminum alloy used for aircraft, with connecting pins of stainless steel. When fully extended, the dome has a diameter of 20 feet and a height of 15 feet, and it sits atop a circle of eight 15-foot-high columns.

With more than 11,400 machined pieces, the retractable dome is an "unfolding structure"—an object that changes size and shape. Its motion resembles a three-dimensional aperture; for 18 hours a day, it smoothly expands up and contracts down, powered by four computer-controlled hydraulic cylinders. A sound-and-light

installation accompanies the movement, and visitors standing beneath the dome can view a scale model of the Frauenkirche reconstruction, which is scheduled for completion by the end of 2006.

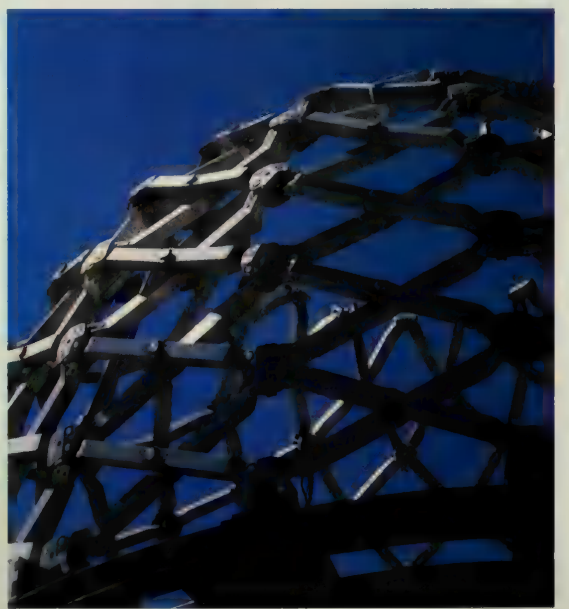
Lorke proposed a collaboration between his exhibit creation firm, iO (Interdisciplinary Objects), and Hoberman's design company, Hoberman Associates, with the goal of creating a bridge between the advanced technology of the retractable dome and the historic reconstruction of the cathedral, which the dome resembles in profile. Hoberman has made an impact on both design and toy enthusiasts with his clever structures, including the iconic Hoberman Sphere at the Liberty Science Center in New Jersey and the Hoberman Mini Sphere, which grows in diameter from 5.5 to 12 inches.

Inspired by the geometries found in nature, Hoberman says he wants to use his structures for practical and functional purposes as well as to delight. "I see this dome as a kinetic architectural element," he says. "Such elements can make spaces that change from indoors to outdoors, allow walls and roofs to 'disappear' when not needed, and create portable shelters that may be quickly unfolded."

The exhibit in Hannover was sponsored by Dresdner Bank, Germany's second-largest bank. According to Hoberman, the dome will have a life after the fair and will go on a tour of Europe when the World's Fair shuts down at the end of October. Its final destination will be the cathedral itself, where it will become part of the reconstructed site. ■







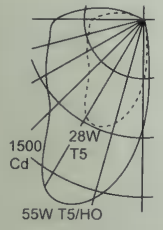
When fully extended, the dome has a height of 15 feet (above). Powered by four digitally controlled hydraulic cylinders, the dome smoothly rises and falls for 18 hours a day.

size matters...

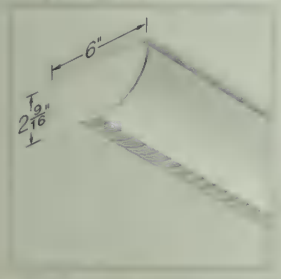
performance, too™

elliptipar's T5 linear fluorescents ... very low profile ... simple elliptical housing ... radial baffles ... matte white finish ... luminaires that blend into their surroundings ... for corridors, art walls, marker boards, classrooms, labs, library stacks, grocery aisles, warehouse stores.

- new extra small reflector engineered for T5 and T5HO lights entire wall evenly
- adjustable aiming
- 1-lamp or 2-lamp styles for lighting vertical surfaces; 3-lamp style adds uplighting
- 1-lamp style – a cost saving alternative to the slot
- integral ballast, dimming optional
- stem, cable and cantilever optional
- continuous rows, quick connect wiring
- all aluminum and stainless steel

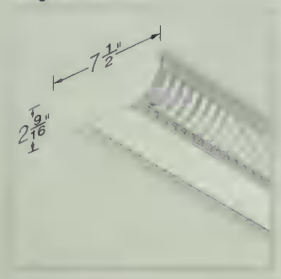


Style F144



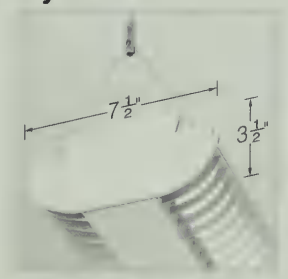
one way*

Style F145



two way*

Style F146



three way*

***our way**

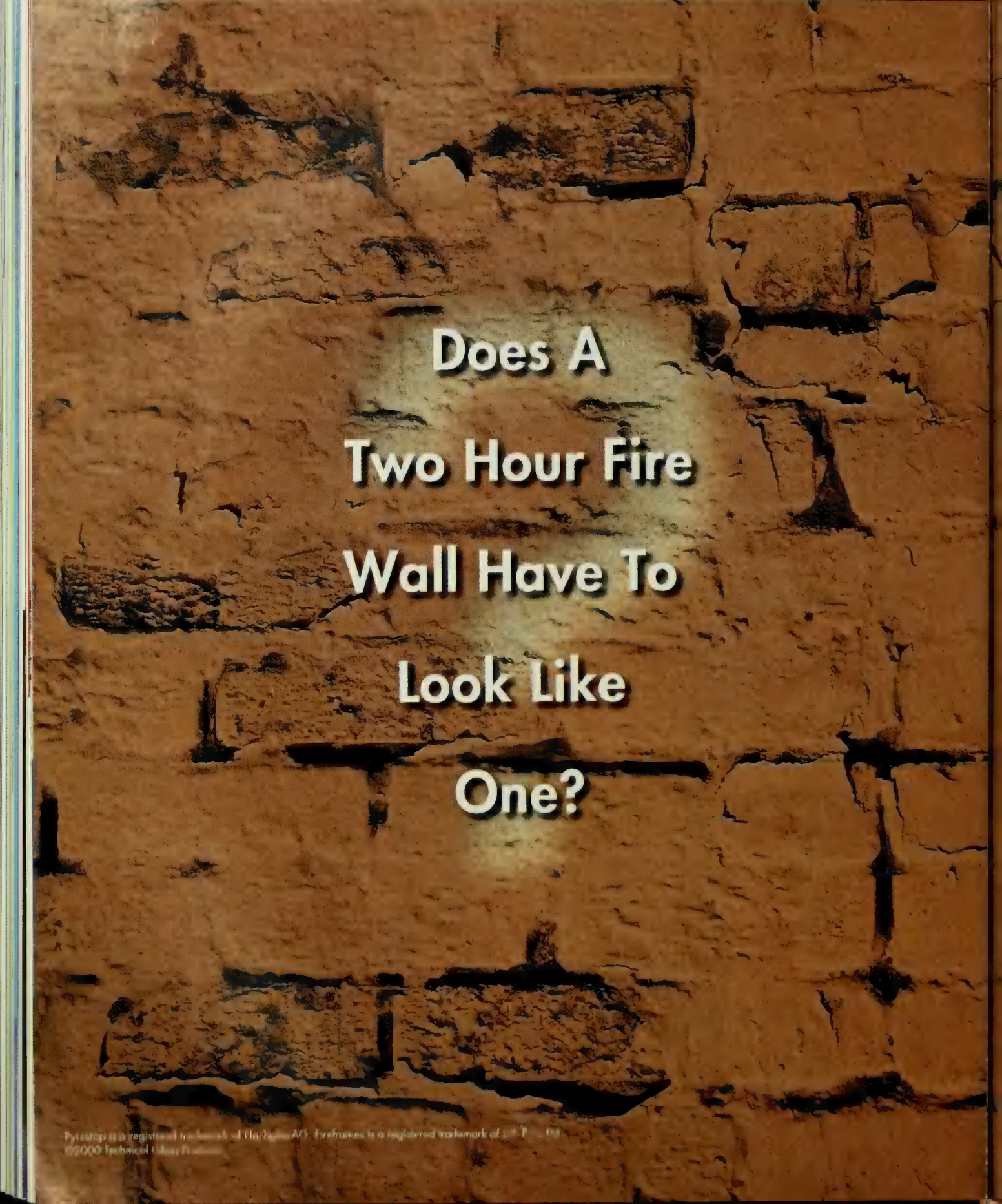
Patents pending

elliptipar

...there is no equal™

114 Orange Avenue
West Haven, CT 06516
203.931.4455 ▪ Fax: 203.931.4464
www.elliptipar.com

CIRCLE 51 ON INQUIRY CARD



Pyrotherm is a registered trademark of Flexicon AG. Firehunter is a registered trademark of
©2000 Technical Glass Products


Not anymore.
And no sprinklers required.
That's right – floor-to-ceiling glass that is actually rated as a wall. Technical Glass Products' unique system combines Pilkington Pyrostop® glass with Fireframes® by Forster to offer you transparent wall units and full-vision doors. Listed by U.L., the system carries fire ratings up to 2 hours and provides a barrier to flames, smoke and heat.
Call today to find out more about this revolutionary system.
1-888-397-FIRE
www.fireglass.com
CLASSIFIED
c UL us
TGP
Technical Glass Products
ONE SOURCE. MANY SOLUTIONS
CIRCLE 52 ON INQUIRY CARD

Making Good Design Pay Off

By Clifford A. Pearson

Good business is not just for businesses anymore. What works for a corporation when it builds a new headquarters or puts up a new factory can also work for a school, a city government, or a museum. That's one of the messages from this year's Business Week/Architectural Record Awards, in which 5 of the 10 winners are (at least partially) institutional projects. Such an expanded definition of business reflects the degree to which dollars-and-cents accountability and microeconomic management have suffused our culture in general. It also shows how business leaders today understand the powerful impact that education, learning, and the public realm have on corporate success. A better educated, more engaged public is essential to economic health.

What's also clear from this year's winners is that architecture has an important role to play in all kinds of buildings—from offices for hip advertising executives to distribution centers for truck drivers and union workers. Good design is not just about image, either. It's about architects, clients, consultants, and contractors working together to solve problems—such as eliminating bottlenecks at a high-traffic shipping facility, or creating an office environment that will attract and retain the best workers, or building an institution that makes astrophysics a big hit with the general public. And size doesn't matter. Whether it's a remodeling of an underground passageway between a department store and a transit station or a $400 million mixed-use project that brings together public and private partners, good design can be the difference between success and failure. In the case of the subterranean passage, a new design resulted in a 12.4 percent increase in visitors—a major boon for a retailer struggling in a difficult economic climate. As for the mixed-use complex, the client won the right to build the project on public land even though it offered the city $13 million less in rent each year than the highest bidder. The difference? An innovative design that captured the public's imagination by transforming an entire facade of the building into a giant, stepped garden open to everyone.

4th Annual Business Week/Architectural Record Awards

Unique among design awards programs, the Business Week/Architectural Record Awards judge entries on both their architectural excellence and the degree to which they advance the clients' business goals. Entries must include detailed information on the results realized by each project. The jury is selected by Business Week, Architectural Record, *and the American Institute of Architects (the awards program's sponsor) and includes practicing architects and business leaders. After the jury narrows the field of entries to about 20 finalists, at least one juror visits each project. For more coverage of the awards see the November 6 issue of* Business Week *or go to www.architecturalrecord.com.*

WWW **To read about the finalists, find out more information about the winners, and learn how to enter next year's awards program, go to architecturalrecord.com**

AT RIGHT: FUKUOKA PREFECTURE AND INTERNATIONAL HALL, FUKUOKA, JAPAN, © HIROMI WATANABE



BUSINESS WEEK/ARCHITECTURAL RECORD AWARDS JURY

- **William T. Agnello**
 Vice president, workplace resources, Sun Microsystems, Inc.
- **Edward L. Ciffone**
 Senior vice president and director of facilities, Morgan Stanley Dean Witter
- **Henry N. Cobb, FAIA**
 Founding partner, Pei Cobb Freed & Partners
- **Robin M. Ellerthorpe, FAIA**
 Senior associate director, facilities consulting, O'Donnell Wicklund Pigozzi & Peterson Architects
- **Julie Eizenberg**
 President, Koning Eizenberg Architecture.
- **James O. Jonassen, FAIA**
 Managing partner, NBBJ
- **Tom Peters**
 Chairman, The Tom Peters Group
- **Wilson F. Pollock, FAIA**
 Founder and president, ADD, Inc.
- **Carol Ross Barney, FAIA**
 Founder and president, Ross Barney & Jankowski, Inc.
- **Jane Weinzapfel, FAIA**
 Principal, Leers Weinzapfel Associates

Jury Designates:

- **Julie Anixter**
 Managing director of new media and R&D, The Tom Peters Group
- **Eric Richert**
 Vice president of workplace operations and research, Sun Microsystems
- **Yvonne Szeto, AIA**
 Partner, Pei Cobb Freed & Partners



Left to right: Ground Zero's Kirk Souder, creative partner; Jim Smith, chairman and CEO; Andrew Gledhill, president; Court Crandall, creative partner

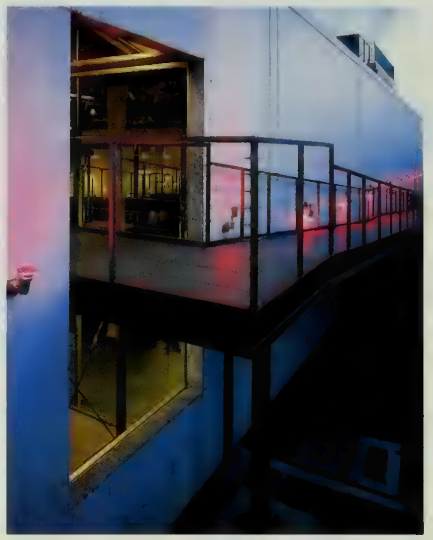
THEATRICAL ARCHITECTURE NOURISHES AD AGENCY IDEAS

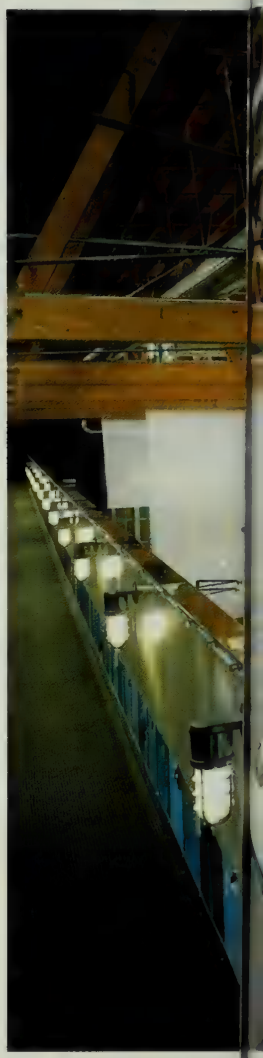
Project: Ground Zero, Marina Del Rey, Calif.
Architect: Shubin + Donaldson Architects
Client: Ground Zero
The Challenge: This young advertising agency had rapidly grown to 70 staff members, billing $75 million per year. It expected to keep growing and so needed a facility that would accommodate new staff, while continuing to nurture the creative excitement that had been key to its success. The firm had become known for providing clients with easy access to its staff and resources, rather than shunting them from department to department, so its partners asked for an open space with few partitions and no private offices. They envisioned a "creative campus" of 25,000 square feet that would help attract and keep clients as well as talented staff.
The Solution: Ground Zero describes its new offices as "a place where dreams show up hungry, naked, and shivering and leave nourished, clothed, and understood." This lurid imagery is fully realized in the facility's movie-set look and feel.

The agency selected the architects in part because their working methods were similar to their own. To convey how their design would embody the agency's creative spirit, the architect made films, starting at the programming stage. These proved to be a means to exchange ideas that both architects and clients could understand.

To implement their vision, the architects punched skylights into the roof of a windowless, tilt-up concrete warehouse, bathing the large open space in light filtered by bowstring trusses. Most of the space has been left open, with an unhierarchical arrangement of curving metal workstations designed by the architects. For visitors, the monumentally ramped space offers a theatrical procession through the creative process. For staff, the clear spaces make it easy to catch up on the activities of other teams.
The Benefits: The new design immediately acquaints prospective clients with the agency's uniquely open, dynamic, and accessible creative culture. It offers spectacle on a tight budget, a message that appeals to clients. As built, the project has improved work flow not only through its openness, but by the generous provision of areas apart from the atelierlike main volume for strategic collaborative thinking, concentrated group and individual work, as well as tasks that require privacy, such as focus-group meetings.

Key Players: *Architect: Russell Shubin, AIA; Robin Donaldson, AIA; Austin Kelly; structural engineer: Raffi Abkarian; mechanical engineer: MB & A: electrical engineer: V&M; client: Kirk Souder, Jim Smith, Andrew Gledhill, Court Crandall*







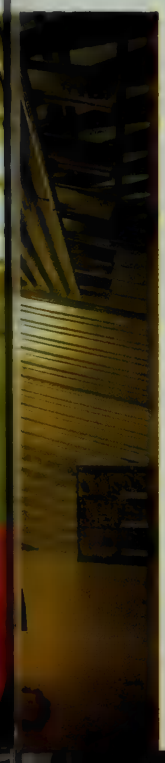


PHOTOGRAPHY: © TOM BONNER





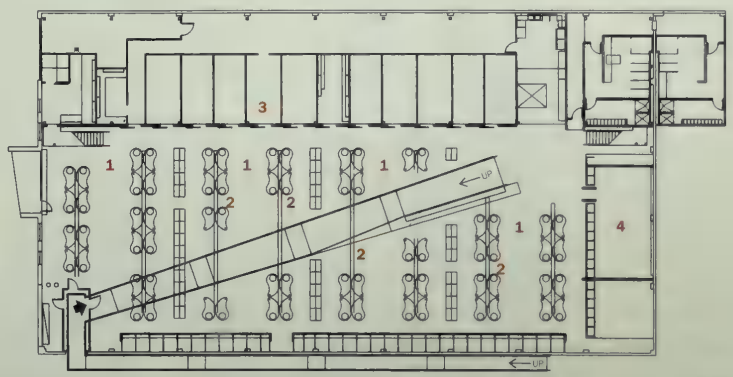
Opposite top: Spilling from a raised entrance (opposite top left), a metal-framed ramp drops more than nine feet as it extends nearly the full length of the space (left). The architects arranged 10 "war rooms"—spaces intended for intense collaborative effort—along one long wall (opposite middle left), cladding them in metal-stud-framed translucent-plastic and corrugated-metal panels (bottom left). Scrims slice the space, creating surfaces on which the agency can project its creative work (above).



"On the site visit we realized this was a close parallel to how advertising works—create the environment and control the user's perspective until the message is conveyed."
—Robin M. Ellerthorpe

"The 'industrial set design' reflects the raw, spontaneous, cutting-edge image that the client was seeking."
—Yvonne Szeto

"In the rapidly changing world of advertising, these architects have created a dynamic space, and the client has hit a home run."
—Jane Weinzapfel



GROUND FLOOR

1. *Open work area*
2. *Scrim divider*
3. *"War room"*
4. *Conference room*



A MACHINED ELEGANCE ENGINEERS MULTI-DISCIPLINE TEAMWORK

Project: Valeo Technical Center, Auburn Hills, Mich.
Architect: Davis Brody Bond Architects
Client: Valeo Thermal Systems
The Challenge: Based in Paris, Valeo is a supplier of new and replacement automotive equipment, with facilities worldwide. As part of a six-year expansion and consolidation of North American facilities, Valeo integrated its Engine Cooling and Climate Control divisions into a single Thermal Systems division. The company asked the architects to design a building that would support collaborative work in cross-functional teams of designers, manufacturing engineers, and testing staff. Though the building had to incorporate technically demanding laboratories, a modest $120 per-square-foot cost was deemed as much as the company could spend.
The Solution: There's a deceptive simplicity to the design, a glass-clad rectangle with a couple of bites taken out. Inside, about half the building is devoted to two layers of offices; the rest is a high-bay lab facility. Though the structure is austerely finished, an underlying richness of detail realizes complex business ambitions.

The key innovation in the design was the subtle intertwining of the offices with the lab and testing areas. A soundproof glass partition divides the two levels of engineering workstations from the high-bay laboratory zone, offering constant visual interaction. Though the budget did not permit the public areas to be either generously scaled or finished, skylights punctuate the key hallways and stairs. The cafeteria is flooded with light from floor-to-ceiling windows and opens onto an outdoor eating area.
The Benefits: The layout of the facility has encouraged greater interaction among design and production teams, and as a result, both quality assurance and adherence to schedule have improved, according to Valeo. Dropped lighting armatures incorporate data and power supplies, allowing easy reconfiguration. This permits Valeo to adjust the size and mix of teams to the tasks at hand. Juror Henry Cobb described the design as "an elegantly purposeful structure, thrilling in its celebration of transparency." Juror Wilson Pollock noted, "It exudes efficiency and beauty." Its elegance has aided both sales and recruitment, says Valeo, raising the profile of the company within this auto-manufacturing capital.





Valeo's Jacques Tillement, Group Property Director

There are many small, high-quality touches, from cable-suspended sunshades on the south elevation (opposite top), to the finely wrought cable-and-rod skylight bracing in the lobby (right). The cafeteria opens onto an outdoor space shaded by airfoil-like louvers (opposite bottom). Lab and office areas share meeting rooms (below).





Key Players: *Architect: Steven M. Davis, FAIA, Frank V. Michielli, AIA, Anthony Louvis, AIA, Carl F. Krebs, AIA, David Manty, AIA; structural engineer: Weidlinger Associates; mechanical engineer: Cosentini Associates; landscape architect: Weintraub Landscape Architects; client: Jacques Tillement*



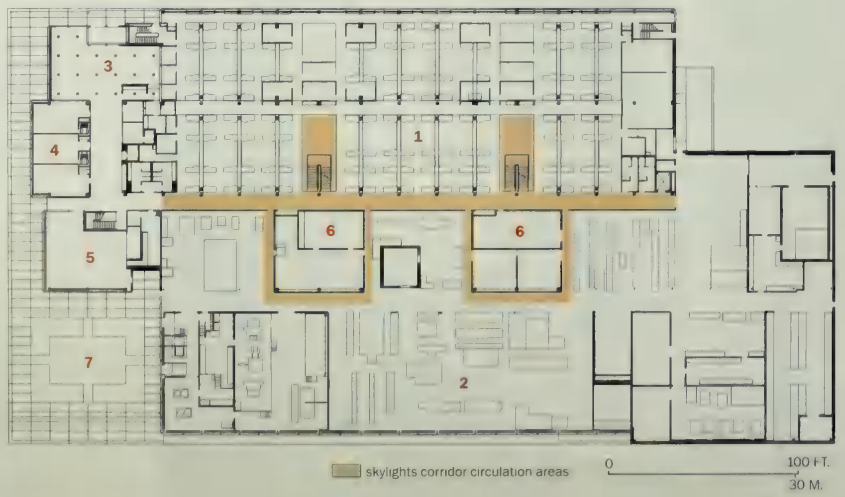


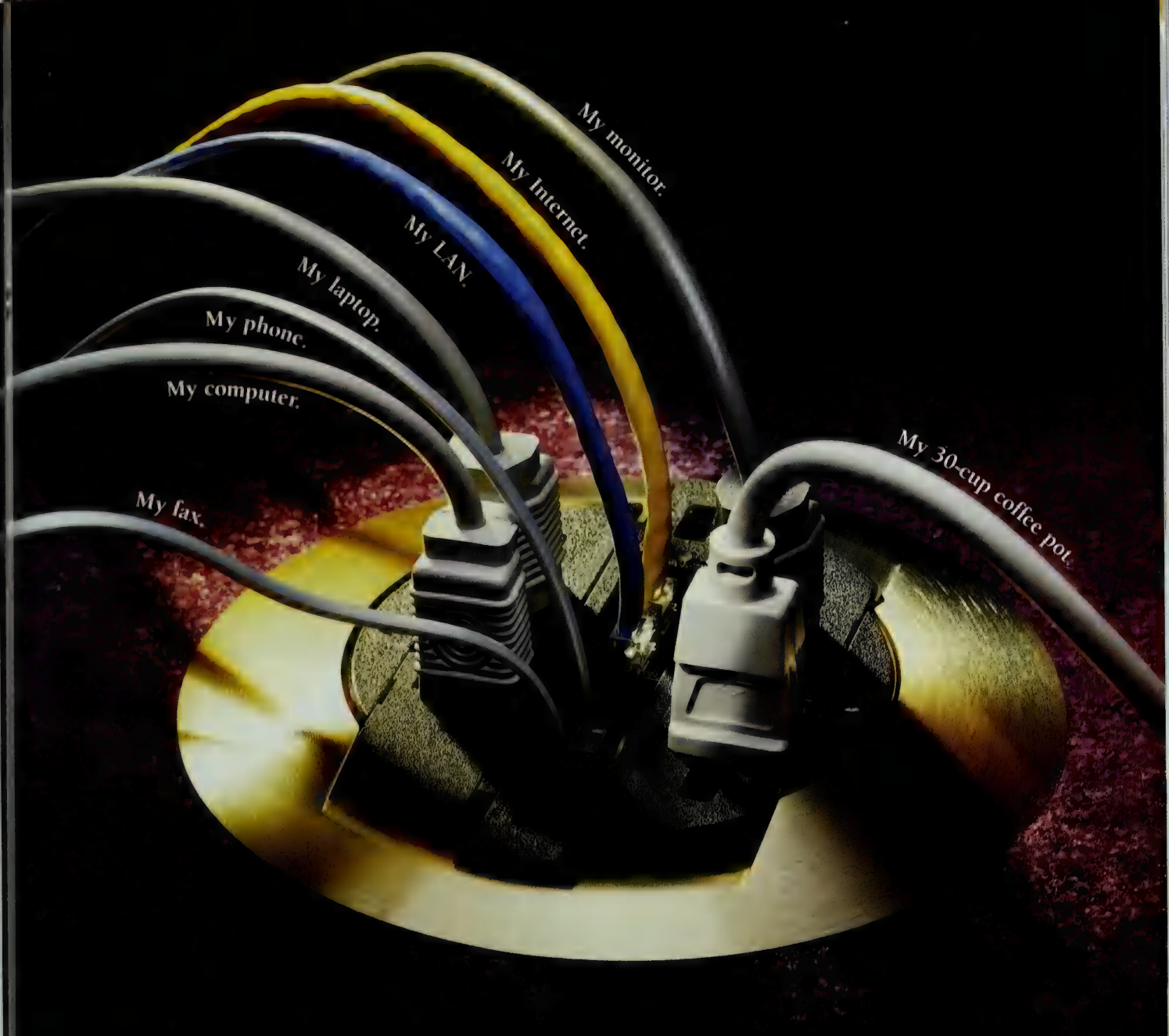
Glass-clad elements (left and plan) project from the office areas (above) into the high-bay space. These contain a variety of meeting rooms, bringing lab technicians in contact with designers, sales staff, and administrative workers.

"The design [redacted] starkly clean and crafted with [redacted] palette of enduring materials that fell within significant budget constraints."—Robin M. Ellerthorpe

"This project clearly aligns the environment with the mission and values of the company. It successfully provides visual integration of a wide range of activities."—James O. Jonassen

1. *Engineering team offices*
2. *Test laboratories*
3. *Lobby*
4. *Conference room*
5. *Cafeteria*
6. *Conference "tower"*
7. *Covered outdoor court*







Industry-exclusive 2-level shield matrix offers protection, individual access and labeling.



Power system with individual neutral and ground strips.

Can your poke-thrus keep up with the hardest workers in your building? The new Walker RC4 can. With four communications outlets and four 20-amp receptacles wired for two circuits, the RC4 offers the industry's maximum capacity. It even accommodates large wall phone transformers. With simple "step-on-it" installation, the RC4 installs 45% faster than other poke-thrus. And easy-to-change Interlink Xpress™ connectivity inserts eliminate the hassle of disassembly and allow your building to evolve as fast as technology. Which means the RC4 will power your buildings' workaholics far into the future. To find out more, just call 1-800-421-0049 or visit www.wiremold.com

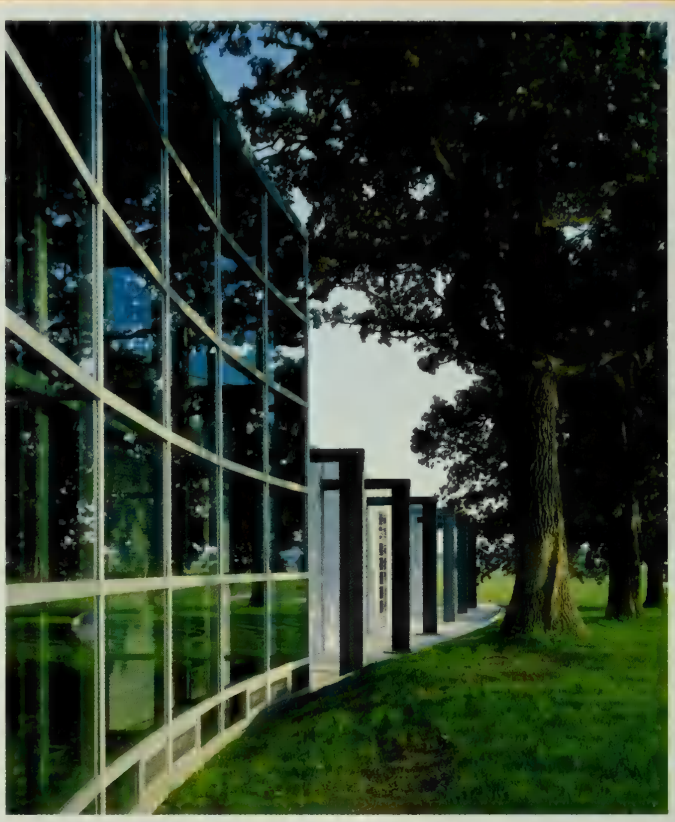
WIREMOLD®

Walker® Infloor Systems

CIRCLE 53 ON INQUIRY CARD



Sticks' Jim Leuders and Sarah Grant-Hutchison, both artists/owners



POETRY COMBINES WITH PRODUCTIVITY IN AN ARTS AND CRAFTS STUDIO

Project: Sticks, Inc., Des Moines
Architect: Herbert Lewis Kruse Blunck Architecture
Client: Sticks, Inc.
The Challenge: Sticks is a rapidly growing artists' studio specializing in the design and production of contemporary art objects made from fallen timber. The company wanted a work environment that was not only more efficient but that could motivate employees with spatial freedom and the enjoyment of nature. By reorganizing the work flow and workspaces, the client hoped to reduce the time needed for manufacturing, handling, and transporting its products.
The Solution: Prior to construction, the artists, architects, and owners spent one year redefining the production processes; this resulted in a design that merged utility with art, nature, and craft. The facility displays its products and the production process, integrating the design and artist studios with the manufacturing and shipping departments. The new building is framed by the surrounding woods and sited for dramatic views. Most interior locations get considerable natural light. All this has paid off by boosting morale and worker productivity.
The Benefits: Four months after the facility opened, the company enjoyed a 20 percent increase in output and a reduction in the time required for handling and transporting products. The savings went to enhance employee benefits, recruitment, and retention programs. Because of these efficiencies, the company was able to get its products to the market faster, while maintaining and improving product quality and workmanship.

Key Players: *Architect: Kirk V. Blunck, FAIA, Peter Goch, AIA, Erin Olson-Douglas, Stephen Knowles, AIA, Dan Vercruysse, Richard Seely, AIA; structural engineer: Charles Saul Engineering; client: Jim Leuders and Sarah Grant-Hutchison*



Carefully nestled in a grove of mature trees, this manufacturing facility is noted for its innovative use of prefabricated building forms, hand-painted doors, and light-filled workspaces.

"A wonderful embodiment of the blend of art, craft and nature, the essence of the business it enables. Artists must find its spatial character and integration with the surrounding woods to be both a creative and productive stimulus."
—James O. Jonassen

"The design has the same one of a kind feeling that their product has. Unique product. Unique building."
—Carol Ross Barney





1. *Millwork shop*
2. *Drawing*
3. *Etching*
4. *Drying*
5. *Finishing*
6. *Painting*
7. *Lounge/kitchen*
8. *Hardware*
9. *Fabrics*
10. *Installation design*
11. *Shipping*
12. *Galleries*
13. *Offices*

See our coverage of Sticks on page 130 of our June 2000 issue.

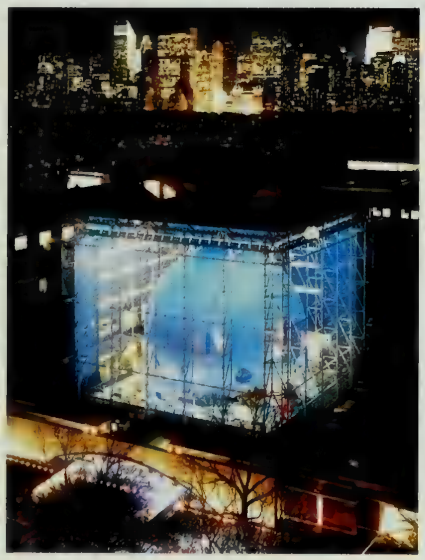
MAKING SCIENCE A SMASH HIT, WHILE GIVING AN OLD MUSEUM A NEW FACE

Project: Frederick Phineas and Sandra Priest Rose Center for Earth and Space, New York City
Architect: Polshek Partnership
Client: American Museum of Natural History
The Challenge: The museum hoped to expand its public profile and educational mission by adding an earth-and-space science center. The new facility had to convey complex scientific information to the general public in an exciting way, while making clear the connections between what goes on in space and life's diversity on earth. The building also had to improve the museum's physical and cultural relationship with its mostly residential neighbors.
The Solution: The architects underscored the museum's public-outreach mission by housing the new center within a clear glass cube 120 feet on each side. Inside the cube is a metal sphere 87 feet in diameter that houses a high-tech planetarium. The simple geometric forms, combined with sophisticated, modern materials, give the Rose Center a timeless identity with the power of an icon. The scope of the project also includes a new public terrace, dining facilities, and an entry pavilion for the museum on the west side of the site.
The Benefits: The Rose Center was an immediate hit, generating a wave of publicity and bringing new visitors to the museum. In the first eight weeks, visitation increased by 58 percent, group reservations by 200 percent, and membership applications by 200 percent. Most important, the 131-year-old museum was seen as one of the most dynamic in the city of New York.

Key Players: *Architects: James Stewart Polshek, AIA, Todd Schliemann, AIA, Joseph L. Fleischer, FAIA, Tyler Donaldson, AIA, David Wallance, AIA, Kala Somvanshi, AIA, Judi Bauer, John Jordan, John Lowery, AIA, Craig McIlhenny, AIA, V. Guy Maxwell; clients: Ellen Futter, Neil deGrasse Tyson; structural engineers: Weidlinger Associates; exhibit design: Ralph Appelbaum; construction manager: Morse Diesel*



Ellen Futter, president, American Museum of Natural History



"The people involved with this project have made what I'm sure will be a new icon for the institution."
—Carol Ross Barney

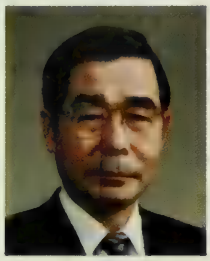
"The project transforms the function, the institution, and the neighborhood in a dramatic and satisfying way."
—Wilson Pollock



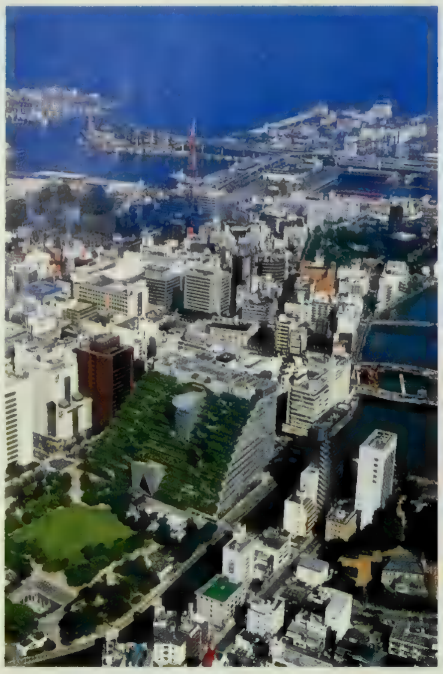


Low iron content makes the cube's curtain-wall glass very clear (left), allowing the building to act as a beacon at night (top) and be visually accessible to its neighbors during the day. Exhibits and graphics, designed by Ralph Appelbaum Associates, work with the Rose Center's architecture to explain such important concepts as scale and time in the universe (above).

See our coverage of the Rose Center for Earth and Space on page 98 of our August 2000 issue.



Tomijirou Morito, president, Daiichi Mutual Life





A large semicircular atrium, 160 feet high, is carved out of the interior of the terraced structure. A park entrance, amphitheater, plus skylight protrude from the growth of vines; stairs lead up to a belvedere.

PLANTED TERRACES MELD A MIXED-USE CITY BUILDING INTO AN URBAN PARK

Project: Fukuoka Prefectural and International Hall, Fukuoka, Japan
Architect: Emilio Ambasz and Associates with Nihon Sekkei and the Takenaka Corp.
Client: Daiichi Mutual Life Insurance Co., Mitsui Real Estate, and Fukuoka Prefecture
The Challenge: The city of Fukuoka decided to appropriate half of the five-acre Tenjin Central Park for a building that would be devoted to governmental and commercial office space. It asked seven insurance companies to assemble teams of architects and builders and submit development schemes for the public/commercial structure. The citizens of Fukuoka were not thrilled about losing so much open space, and during the decision-making process, the final choices were somehow leaked to the press. The public rallied behind the literally greener, terraced design conceived by Emilio Ambasz.
The Solution: Ambasz's scheme, a 1-million-square-foot concrete-and-steel-frame structure, is 15 stories high, with terraces spilling down the south face to the park. The lushly planted terraces are accessible to the occupants of the building. Interior spaces include an exhibition hall, a 2,000-seat concert hall, conference facilities, shops, and parking.
The Benefits: The clients report that heating and cooling costs are some 20 percent lower than their original estimate because of the landscaping. Since the terraces are laced with stairs that can double as fire exits, the owners could use the designated interior space for leasable square footage. In addition, Daiichi believes it saved $780 million by winning the 60-year land-lease contract with a lower bid ($7 million a year), compared to a competitor who offered $20 million.

Key Players: *Architect: Emilio Ambasz, Nihon Sekkei, Takenaka Corp.; architect of record: Nihon Sekkei; contractor: Takenaka Corp.; engineers: Nihon Sekkei and Takenaka Corp.; landscape architect: Plantago Corp.*

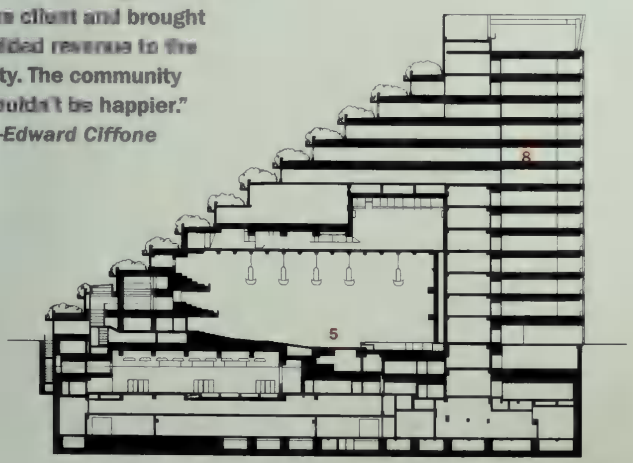




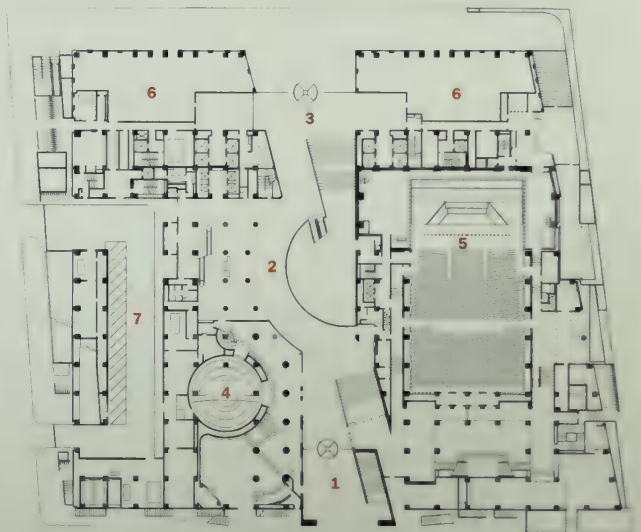
"The wall of wild hillscape is magical—an exuberant gesture. It is an icon that helps the business identity of the city. And it is well built."
—Julie Eizenberg

"Due to the excellent and exquisite design elements, the building met the business goals for the client and brought added revenue to the city. The community couldn't be happier."
—Edward Ciffone

1. *Park entrance*
2. *Lobby*
3. *Street entrance*
4. *Museum*
5. *Auditorium*
6. *Retail*
7. *Parking ramp*
8. *Offices*



SECTION THROUGH AUDITORIUM



GROUND FLOOR





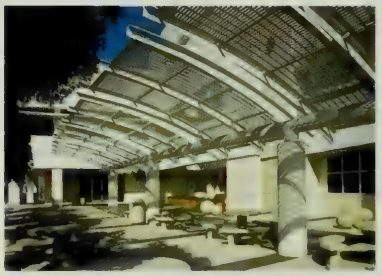
Larry Bennett, terminal manager



BEAUTY AND FUNCTION JOIN IN POETIC AND WELL-SITED CONTAINER TERMINAL

Project: Entry Gate Complex, Hanjin Container Terminal, Los Angeles
Architect: Robert Stewart Architect/Caldwell Architects
Client: Hanjin Shipping
The Challenge: Hanjin Shipping is among the world's fastest growing ocean shipping lines, with 3,400 employees in 47 countries. To meet growth projections, the company needed to move from its 59-acre terminal to a much larger one, improve productivity among its three worker groups, eliminate bottlenecks, and incorporate flexible, state-of-the-art technology.
The Solution: Diligent programming and thorough consideration of how to integrate the site, the buildings, and the workflow were constrained by cost and square footage restrictions. In addition to moving to a 175-acre site, the client teamed with the architect and operator to interview user groups and re-create from scratch a plan that matched the workflow. The architects applied a consistent design vocabulary to the gate buildings, guard booths, truck canopies, and employee terminal, thus keeping trucks moving efficiently through the complex. The design team found ways to improve the working environment, including the provision of break rooms and landscaped patios. Functioning in an industrial, typically underdesigned environment, the design team showed how thoughtful design can fulfill straightforward economic goals.
The Benefits: Hanjin now boasts the port's largest operating terminal, and its doubled target volume of one million container moves was realized after two years. The design optimizes the users' effectiveness and enhances their daily lives with amenities. With corporate staff preparing for the development of new terminals in two other U.S. ports, the research and development accomplished here will be used as a benchmark for the future.

Key Players: *Architect: Robert Stewart, AIA, Harold Ellis, Assoc. AIA; associate architect: John Caldwell, AIA, Vinceena Kelly, AIA, Dan Whalen, AIA; structural: Johnson & Nielsen; mechanical: F.T. Andrews; electrical: Moffatt & Nichol Engineers*



The gate complex processes inbound and outbound trucks (top left). The break area is sheltered from the truck queue by the Gate Building (top right), which houses offices and employee amenities (above).

"Their stunning success in increased efficiency is matched by the caliber of the employee-support facilities. The site plan is beautifully developed, and the architecture is thoughtful and cleanly detailed. This is a large, proud, and humane infrastructure project."
—Jane Weinzapfel

"Who says a container terminal can't have beauty, grace, impact, and wow?"
—Julie Anixter



1. *Drivers' trouble office*
2. *Clerk area*
3. *Office*
4. *Break room*
5. *Patio*
6. *Lobby*
7. *Break room*
8. *Union patio*



Be understood with Viecon.com

Every year, billions of dollars are lost in the E/C/O communication gap. Viecon.com by Bentley is the only project extranet that brings building professionals together to bridge that gap. Replacing exclusion with inclusion. Ignorance with enlightenment. Quickly. Easily. Powerfully. From online meetings and threaded discussions to fluid task and team management tools. So the right hand knows what the left hand is doing. And then some. All backed by Bentley's commitment to superior technology. Viecon.com. Work together.

viecon.com
by Bentley

CIRCLE 54 ON INQUIRY CARD

© 2000 Bentley Systems, Incorporated Bentley is a registered trademark and Viecon is a trademark of Bentley Systems, Incorporated Software, Inc. BAA006930-1/00017/00



(left to right) Angie Perrone Horvat, facilities manager; John De Santol, president; Ezra Dabah, chairman and CEO; Mario Ciampi, senior vice president; Ryan Andersen, project manager



IMAGINATIVE HEADQUARTERS STIMULATES CREATIVITY IN WORKFORCE

Project: The Children's Place Headquarters, Secaucus, N.J.
Architect: Davis Brody Bond, LLP
Client: The Children's Place
The Challenge: This rapidly expanding retailer of specialty apparel and accessories for children needed a new headquarters. Counter to the prevailing corporate retail strategy of investing in stores only, the company decided investing in their offices would improve internal coordination, which would increase sales and revenue. Research conducted by a workplace strategist, the architects, and the contractor identified key parameters to be considered in the design, including the degree of interaction and autonomy among employees.
The Solution: The architects developed a design that replaced the company's workspace, which had almost no shared spaces, with a new building offering many different settings for groups to gather together and share ideas. Materials and products already being used in the retail stores were employed, which saved money and closely identified the offices with the products.

The Benefits: Results include a favorable mention in a Merrill Lynch analyst report. Employee retention is at 95 percent, and recruitment and productivity have increased. Users say the workplace supports the creative process, breeds enthusiasm and love of the job, and facilitates collaboration. Visual links between the distribution center, offices, and on-site store provide a feeling of integration and team culture while keeping the workforce in touch with the marketplace.

Key Players: *Carl F. Krebs, AIA, Nathan Hoyt, AIA, Jennifer Lee, Amy Chase; associate firm: DEGW North America, LLC; workplace strategy consultant: Andrew M. Laing; structural engineer: Leslie E. Robertson Associates; MEP engineer: Ambrosino DePinto & Schmeider Consulting*

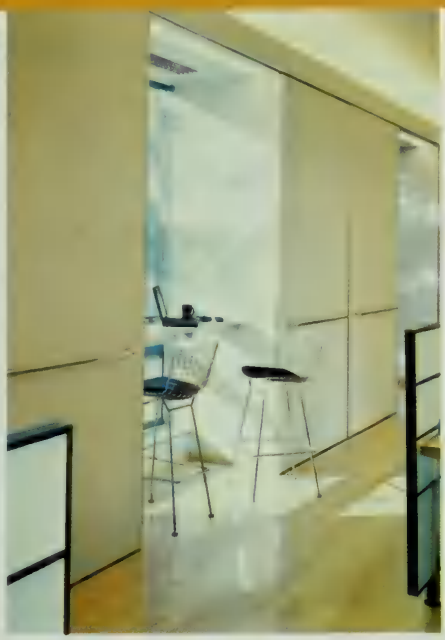


The program included a full-scale retail store as an on-premises working laboratory to test and refine merchandising and design concepts (opposite right). Every element in the new headquarters is carefully articulated, which sends a message to employees that their efforts are valued.



"Forget 'location, location, location.' When it comes to 'getting it' about what *talent* needs and wants, the Children's Place is imagination, imagination, imagination."
—Julie Anixter

"This exceptionally comfortable, bright, and lovingly detailed workplace resulted from unusual care and collaboration. It is effective and productive, inspiring employees and charming visitors."
—Wilson Pollock











BLENDING THE GLOBAL WITH THE LOCAL, A NEW SCHOOL IS A BIG HIT

Project: Mahindra United World College of India, Pune, India
Architect: Christopher Charles Benninger & Associates and Peter Charles Wilson & Associates
Client: Mahindra United World College of India
The Challenge: To design and build an entire campus for a new college-preparatory school in just 14 months. Funded by an international industrial conglomerate, the school needed to be a top-tier educational institution that could attract an international community of 200 students, 30 faculty members, and 40 support staff.
The Solution: Combining modern architecture with local materials and traditional elements, such as sitting platforms and Indian *kund* steps, the architects created an institution that is both progressive in its design mission and rooted in its local context. The buildings hug the rolling hills of the Sahayadri Mountains while turning to capture views of the landscape. Clusters of buildings help establish a sense of community and define a variety of outdoor spaces, from quadrangles to yards to walled courts. The architects incorporated local beliefs in their master plan, so the entrance gate, or *mahadwara*, aligns with the auspicious north-south axis, and the academic quadrangle opens onto all four cardinal directions.
The Benefits: The school's impressive campus and architecture helped to attract students from 45 countries in its first year and more than 60 in its second. Within two years, the rate of applications jumped from 5 per available seat to 28 for each seat. While the school trust needed to subsidize 59 percent of the institution's operating costs in the first year, the school is expected to break even in the 2000–2001 fiscal year and to generate a surplus starting in 2002. The school has won architectural awards and garnered attention in the Asian press.

Key Players: *Architect: Christopher C. Benninger, Madhav Joshi, Peter Wilson; interior designer: Hemant Khire; structural engineer: C. E. Godse; engineer: Rahul Sathe; landscape architect: Varsha and Ravi Govande; client: Anand Mahinda, M.M. Raiji*



Anand Mahindra, managing director of Mahindra and Mahindra, India



PHOTOGRAPHY: © AMIT OBEROI, A. RAMPRASAD NAIDU, COL. V. MUNDKUR (AERIAL PHOTOS)

"An example of innovation without extravagance. [The school] is a jewel-like educational community that adventurously interprets cultural heritage."
—Julie Anixter

"This project creates a community spirit that is an important part of learning."
—Eric Richert

"There is a rich mosaic of forms set in the landscape, along with well-scaled spaces."
—Yvonne Szeto





The 150-acre campus in Maharashtra province southeast of Mumbai (Bombay) encompasses a group of academic buildings and a series of residential clusters (opposite, left and right). The library (left) wraps around a small court. Broad steps provide access and places to relax (above).



Local materials, such as stones and clay roof tiles, work with cast and poured concrete to create a rich palette of textures and colors (left). The art center (bottom) includes three studios with large walls of glass. The campus was designed so the buildings and spaces between the buildings capture views of hills, distant lakes, and the river valley below.

"There is a strong village/campus expression that seems very much at home in its landscape. [The school] unites cultural insight with the educational experience."
—Jim Jonassen





1. *Security*
2. *Science center*
3. *Administration*
4. *Toilets*
5. *Catering*
6. *Classroom*
7. *Library*
8. *Arts center*
9. *Multipurpose hall*



Rock.
Stone.
Chapel Stone™

Hanover® introduces Chapel Stone™ Masonry Walling. Nothing quite adds charm to a building or home like stone. Hanover's Chapel Stone™ Masonry Walling makes this beautiful characteristic affordable and available. Manufactured from the highest quality concrete with over a million pounds of pressure, the product has the same density and high compressive strengths of natural stone.

Hanover® Chapel Stone™ has a natural texture which is uniquely grained and unmatched, when compared to other similar products. The Masonry Walling is made in two natural color blends, Gray Blend and Tan Blend. These are designed to incorporate several shades within each color range, while keeping the natural stone tones for the project.



Gray Blend



Tan Blend



HANOVER®
Architectural Products
Where Concrete and Imagination Meet

240 Bender Road, Hanover, PA 17331
(ph) 717-637-0500 ▪ (fax) 717-637-7145
www.hanoverpavers.com

CIRCLE 55 ON INQUIRY CARD



Diane Couture, general director (left), Raymonde Rivard, president (right)





"A building that celebrates the value of good workmanship with dignity and panache."
—Henry Cobb

"This trade school employs expressive forms and materials and a rigorous plan to create a welcoming public building that is understandable in the whole and parts to students and businesspeople alike. It is a very successful landmark in its community."
—Jane Weinzapfel

TRADE SCHOOL SETS A HIGH BAR FOR STUDENTS THROUGH BOLD, DIRECT DESIGN

Project: Saint-Hyacinthe School of Trades and Technologies, Quebec
Architect: ABCP Architecture-Urbanisme
Client: Commission Scolaire Saint-Hyacinthe
The Challenge: The client's mission was to build a 95,000-square-foot state-of-the-art trade school for students aged 17–45, part of a larger effort to attract more students to trade training. The architects were asked to develop a flexible program that could meet the needs of an evolving academic curriculum. The environment was to enhance students' social development and pride of workmanship, provide spaces for interprofessional exchanges, and offer a place of dignity that says through its design that the students are important.
The Solution: The school succeeds in combining all trade programs into one cohesive unit. Building on the original concept of student interaction, the architects created two lounge areas: the Rock Cafe, a student lounge along the main circulation route; and the *préau*, which refers to the elegant metal canopy that supports a curved roof and serves as a large gathering place for dining, lounge, and study. The *préau* blends the public, circulation, and social areas into one volume, and the Rock Cafe provides a game and relaxation area. The importance of detail and natural light are illustrated in the design, and the building itself is a teaching tool for construction-related studies.
The Benefits: Programmatic results included a growth in skill programs, from 9 programs for 600 students in 1993 to 27 programs for more than 1,500 students today. Energy efficiencies reduced costs by 25 percent annually, and the school has become enmeshed in the social fabric of the community, a recognized icon of achievement.

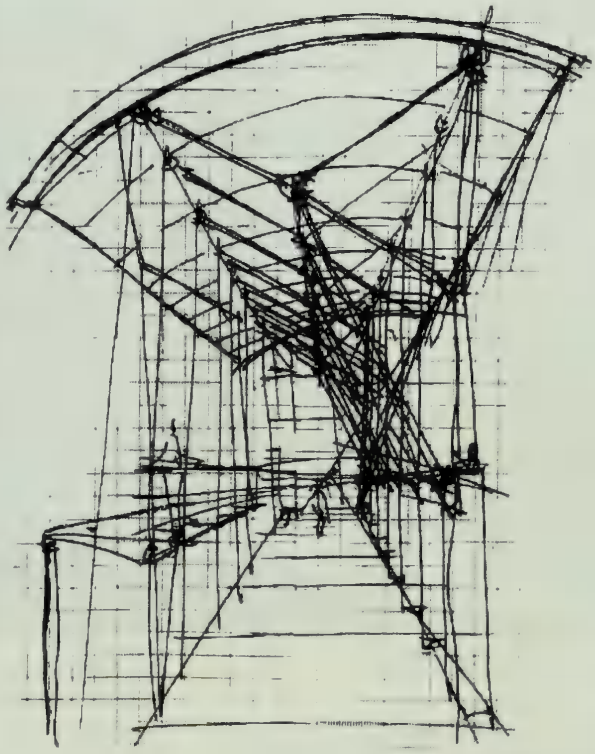
Key Players: *Architect: Sylvain Allaire, Alain Bergeron, Guy Courchesne, Serge Perras; structural and electrical engineer: Le Groupe René Guilmaine; mechanical engineer: Le Groupe HBA; client: Raymonde Rivard, Diane Couture, Jean-François Soumis*





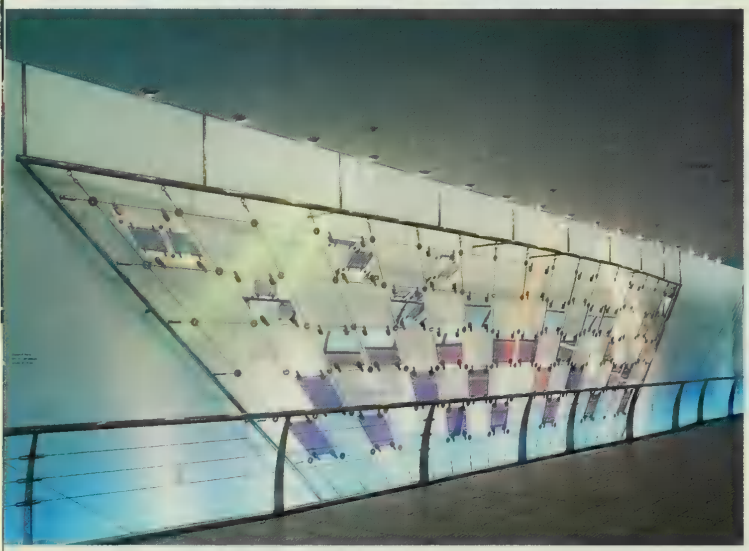
Exterior images show the metal canopy and glass face of the *préau*—the main gathering area for students (opposite); variations in the interior wood, metal, glass, and masonry detailing distinguish teaching, circulation, and public areas (this page).











"This is a clever and elegant 'bridge over water' concept, used to offset the negative connotations of a pedestrian tunnel. The bridges are suspended, shimmering sculptures of steel, cable, and glass. The addition of the sounds of water and human voices makes for a multisensory experience."
—Yvonne Szeto

"Elegant, imaginative, captivating."
—Henry Cobb

Bridgelike elements introduce rhythm and cadence along the path (top); framed dichroic glass panels line the central "bridge" (above); the passageway gracefully spills into the department store, reflecting the store's elegant, contemporary style (bottom).



Kenichi Nakamuta, president of Iwataya

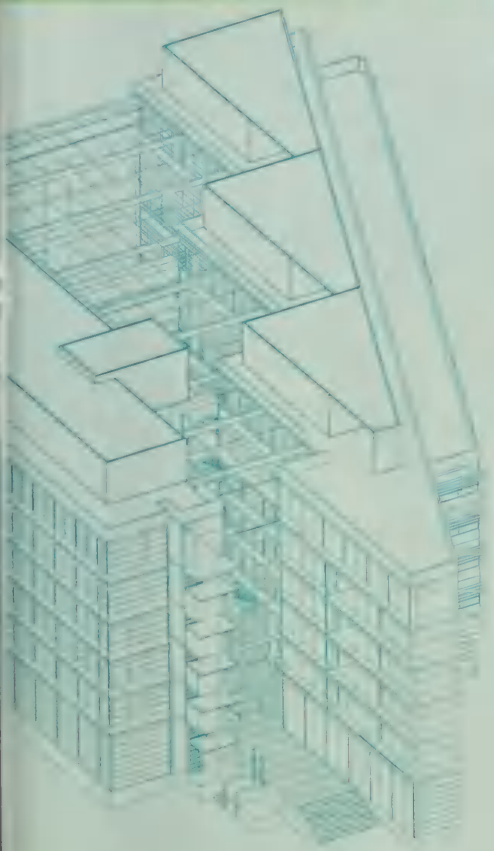
ARTFUL TUNNEL ENLIVENS BUSINESS WHILE PROVIDING TRANQUIL PASSAGE

Project: Tenjin Kiramekidori Passage, Fukuoka, Japan
Architect: Walker Group/CNI, New York City
Client: Iwataya Department Store, the NT&T Kyushu Development Co., Ltd., and the City of Fukuoka
The Challenge: The city of Fukuoka, known as the "Venice of Japan," has such heavy rainfall that an underground network of pedestrian tunnels was created to connect office and retail buildings to transportation hubs. The Iwataya department store initiated this project because it was losing customers to shops located in the subway station. The goal of the project was to create an underground passage that would allow customers access to the store regardless of weather and to increase traffic to basement floors, which historically were less profitable.
The Solution: A 400-foot passageway, the first phase of a long-term development plan, was built. Because stores were not allowed in the tunnel, the architects generated interest in an otherwise plain space with a water theme and a series of three pedestrian bridges, inspired by a network of bridges that span the city's old canals. Constructed of steel, cables, and suspended glass, these bridges punctuate the passage at its beginning, middle, and end. An interactive sound program and soft lighting animate the design, creating a multisensory experience that makes the thoroughfare an escape from the urban realm.
The Benefits: Results include a 9.6 percent increase in visitors on weekdays and a 2.2 percent increase on weekends. In 1999, 20.5 percent of shoppers came through the passageway, and this figure increased to 22.6 percent in 2000 so far. The passageway contributed to overall profitability of the department store, with the basement level becoming the home of fashionable merchandise previously found on street-level floors.

Key Players: *Architect: Jay Valgora, Alan F. Adamec, AIA, Michele Alfano, Steven Kitezh, Takashi Tsukahara; multimedia consultants: Art in Commerce; engineers: FTL Happold; client: Kenichi Nakamuta*



"GOOD DESIGN IS GOOD BUSINESS"



DESIGN STRATEGIES FOR THE NEW ECONOMY

A Conference Presented by

Business Week/Architectural Record

and The National Building Museum

in association with The American Institute of Architects

November 17, 2000

National Building Museum

Washington, DC

Join us for:

- A half-day conference bringing together key business leaders and architects discussing successful collaborations between architects and clients that result in the achievement of business goals.
- A showcase of the award-winning projects and a presentation honoring the recipients of the fourth annual Business Week/Architectural Record Awards.
- A special reception, immediately following the conference from 6 to 8 pm, for the opening of the National Building Museum's major new exhibition, "On the Job: Design and the American Office"

Sponsors:

BENTLEY *Engineering the future together*

MILLIKEN

HermanMiller

THE AMERICAN INSTITUTE OF ARCHITECTS

ARCHITECTURAL RECORD
McGraw Hill Construction Information Group

BusinessWeek

NATIONAL BUILDING MUSEUM

CONFERENCE REGISTRATION FORM

To register, fill in and fax this form to: National Building Museum, 202-376-3564. Or access the registration form on www.architecturalrecord.com or on www.nbm.org. Registrations may also be mailed to: Good Design Conference, National Building Museum, 401 F Street, NW, Washington, DC 20001.

For further information or to register by phone, call 202-272-2448.

Registration fee: $55; $50 for members of the Museum and The AIA.

Please register me for "**GOOD DESIGN IS GOOD BUSINESS**" Conference. For multiple registrations, complete a separate form for each registrant.

Name _____ Title _____

Company _____

Address _____ City/State/Zip _____

Phone _____ Fax _____ E-mail _____

Form of Payment: [] AMEX [] MasterCard [] Discover Card [] VISA

Card Number _____ Expiration Date _____

Cardholder's Name (as it appears on the card) _____

Cardholder's Signature _____



LIMITED *FLOORING*

CHOICES

CAN MAKE YOUR DESIGN

FALL FLAT

ON ITS FACE.

How can you take your design to the next step if you're confined to one company's limited choices? To see a concept through to completion requires a contractor who isn't restricted by manufacturer alliances and who has the selection and experience to fulfill your design. That combination perfectly describes your local, independent StarNet flooring contractor. Independent means an unrestricted selection of products. Local means a single contractor who's on site and personally committed to meeting your needs and deadlines. So if you want to rise to the occasion without stumbling, we'll be there for you every step of the way. To reach your local StarNet member call 1-800-787-6381.

STARNET

INDEPENDENT FLOORING COOPERATIVE

www.starnetflooring.com

1-800-787-6381

Alabama

Terry Fry Flooring
Birmingham, (205) 870-4334

Arizona

Sun Country Floors, Inc.
Mesa, (480) 497-5011
Wholesale Floors
Phoenix, (602) 248-7878

California

B.T. Mancini Co., Inc.
Milpitas, (408) 942-7900
Sacramento, (916) 381-3660
Cinderella Showcase
Salinas, (831) 757-1950
San Luis Obispo, (805) 544-0324
Floorcovering Consultants Grp.
Culver City, (310) 559-2588
Oceanside, (760) 758-4188
Harry L. Murphy, Inc.
San Jose, (408) 955-1100
Hoem-Schurba & Associates
S. San Francisco, (650) 871-5194
Howard's Rug Co. of San Diego
San Diego, (858) 558-3939
Majestic Floors, Inc.
Concord, (925) 825-0771
Universal Flooring Systems, Inc.
Huntington Beach, (714) 373-1136
Wallach's Commercial Flooring
Irvine, (949) 859-1009

Colorado

Bonitz Flooring Group, Inc.
Colorado Springs, (719) 593-2220
Evans & Company, Inc.
Denver, (303) 573-4928

Connecticut

BKM Floorcovering
East Hartford, (860) 528-9981
Milford, (203) 874-7754
Stamford, (203) 324-3188
Commercial Flooring Concepts, Inc.
Windsor, (860) 683-0673
R.D. Weis & Companies.
S. Windsor, (860)528-9637

Delaware

Pala Tile & Carpet Contractors
Elsmere, (302) 652-4500

Florida

Dixie Contract Carpet, Inc.
Jacksonville, (904) 296-0023
Spraggins Contract Interiors
Orlando, (407) 295-4150
The Duffy & Lee Carpet Company
Fort Lauderdale, (954) 467-1288
Lakeland, (863) 666-5548

Georgia

Bonitz Flooring Group, Inc.
Atlanta, (770) 952-4093
Southeastern Comm. Flrg., Inc.
Woodstock, (770) 591-9980

Hawaii

Island Flooring Co., Inc.
Honolulu, (808) 847-6577

Idaho

Wall 2 Wall Commercial Flrg.
Boise, (208) 376-0136
Idaho Falls, (208) 523-5490
Pocatello, (208) 232-4226
Sun Valley, (208) 726-0791

Illinois

Commercial Carpet Consultants
Des Plaines, (847) 298-9570
Mt. Prospect, (847) 640-8060
Mr. David's Carpet Service, Ltd.
Carol Stream, (630) 260-9400

Indiana

Certified Floorcovering Svs.
Indianapolis, (317) 872-7926
Interior Finishes, Inc.
Osceola, (219) 674-9975
Strahm Group, Inc.
Fort Wayne, (219) 489-2537

Iowa

Commercial Flooring Company
Dubuque, (319) 582-4976

Kansas

Artistic Floorcovering, Inc.
Lenexa, (913) 317-8623
CAP Carpet, Inc.
Topeka, (785) 273-1402
Wichita, (316) 262-3491
Interior Surface Company, Inc.
Olathe, (913) 397-8100

Louisiana

Craft-Croswell Contract
Harahan, (504) 734-1519
Royerre Commercial Carpets
Metairie, (504) 833-6331

Maine

Paul G. White Tile Co., Inc.
Portland, (207) 797-4657

Maryland

Apartment & Business Flrg. Sys.
Baltimore, (410) 485-6790
Carpet Fair, Inc.
Baltimore, (410) 265-6633
CB Flooring
Columbia, (410) 381-5400
Frederick, (301) 662-6168
Suburban Floorcoverings
Landover, (301) 773-1600

Massachusetts

Allegheny Contract Flooring, Inc.
Woburn, (781) 935-1077
Business Interiors Flrcvg., Inc.
Woburn, (781) 938-9994
Mousseau Contract Flooring
So. Attleboro, (508) 761-8870
R.D. Weis & Co., Inc.
Allston, (617) 787-1009

Michigan

Central Tile & Terrazzo Co., Inc.
Kalamazoo, (616) 375-1660
Floor Craft Floor Covering, Inc.
Clinton Township, (810) 468-9900

Minnesota

Multiple Concepts Interiors
Brooklyn Park, (612) 537-5006
Waite Park, (320) 253-5078
St. Paul Linoleum & Carpet Co.
Eagan, (651) 686-7770

Mississippi

Craft-Croswell Contract
Hattiesburg, (601) 296-1827
Ridgeland, (601) 856-8861

Missouri

Wm. J. Zickel Co., Inc.
Fenton, (636) 343-8663
Kansas City, (816) 471-5100
Springfield, (417) 831-3521

Montana

Pierce Flooring & Design Ctr.
Billings, (406) 652-4666
Bozeman, (406) 587-5428
Butte, (406) 494-3313
Great Falls, (406) 727-3832
Missoula, (406) 543-8224

Nebraska

Commercial Flooring Systems, Inc.
Omaha, (402) 592-4383

New Hampshire

A&E Flooring, Inc.
Hookset, (603) 625-1266
Merrimac Tile Co., Inc
Derry, (603) 432-2544
Paul G. White Tile Co., Inc.
New Market, (603) 659-3223

Nevada

B.T. Mancini Co., Inc.
Sparks, (775) 359-3007

New Jersey

Flooring Technologies, Inc.
Whippany, (973) 386-1600
The Gillespie Group, Inc.
North Brunswick, (732) 940-7777
Independent Comm. Flrg. Sys., Inc.
Englewood, (201) 894-0044
M.E. Sabosik Associates, Inc.
Pt. Pleasant, (732) 892-2800
Metropolitan Contract Carpets
Cherry Hill, (856) 795-1177

New Mexico

Business Environments
Albuquerque, (505) 888-4400

New York

Associated/ACC International Ltd.
New York City, (212) 633-0250
Commercial Floors Beautiful
White Plains, (914) 949-1400
CTS Flooring
New York City, (212) 953-5133
Fraser/Gold Carpet Corp.
New York City, (212) 751-3455
Lane's Floor Coverings & Interiors
New York City, (212) 532-5200
National Flooring Systems
Great Neck, (516) 498-9622
New York Carpet Corp.
New York City, (212) 736-1132
R.D. Weis Companies
Port Chester, (914) 937-9337
Victor, (716) 924-0320
The Sposato Companies
Liverpool, (315) 422-1489

North Carolina

Bonitz Flooring Group, Inc.
Charlotte, (704) 598-0094
Fayetteville, (910) 223-0025
Greensboro, (336) 996-9900
Raleigh, (919) 380-0084
Burton Floorcovering, Inc.
Pineville, (704) 583-0005
E.E. Wilson Floor Covering, Inc.
Lexington, (336) 357-5555

Ohio

OCP Contractors, Inc.
Holland, (419) 865-7168

Oregon

Fashion Floors
Medford, (541) 779-0996
Rubenstein's Contract Carpet
Eugene, (541) 484-1101
Portland, (503) 224-1007

Pennsylvania

CTS Flooring
Limerick, (610) 489-6270
Facility Services Group, Inc.
Conshohocken, (610) 940-4370
Owen M. Bastian, Inc.
Allentown, (610) 798-9910
Wescosville, (610) 798-9910
Sliwinski Flrcvg Group, Inc.
Huntingdon Valley, (215) 364-9661

Rhode Island

Ruggieri Flooring, Inc.
Cranston, (401) 942-1700

South Carolina

Bonitz Flooring Group, Inc.
Charleston, (843) 556-2840
Columbia, (803) 799-0181
Greenville, (864) 288-3771
N. Augusta, (803) 279-6411

Tennessee

Bonitz Flooring Group, Inc.
Chattanooga, (423) 697-9456
Knoxville, (865) 588-3630

Texas

Corporate Care, Inc.
Houston, (713) 692-6300
Flooring Associates
Fort Worth, (817) 332-6977
Intertech Flooring
Austin, (512) 385-4574
San Antonio, (210) 650-9670
RWA Flooring Solutions
Bedford, (817) 858-6634
San Antonio Floor Finisher's, Inc.
San Antonio, (210) 341-7101
Texan Floor Service, Ltd.
Houston, (713) 956-9966
Vector Concepts, Inc.
Fort Worth, (817) 595-7439
Irving, (972) 399-1303

Utah

Wall 2 Wall Commercial Flrg.
Ogden, (801) 621-2733
Salt Lake City, (801) 288-2794

Virginia

Commercial Carpets of America
Alexandria, (703) 370-0000
Prestige Floors, Inc.
Virginia Beach, (757) 468-5600
Walker's Carpets & Interiors, Inc.
Glen Allen, (804) 262-3636

Washington

Evergreen Commercial Flooring
Bellevue, (425) 883-8680
Rubenstein's Contract Carpet
Olympia, (360) 753-9156
Seattle, (206) 762-5610
Spokane, (509) 328-7220

Wisconsin

Sergenian's Floor Coverings
Beaver Dam, (920) 887-7611
Madison, (608) 273-6300

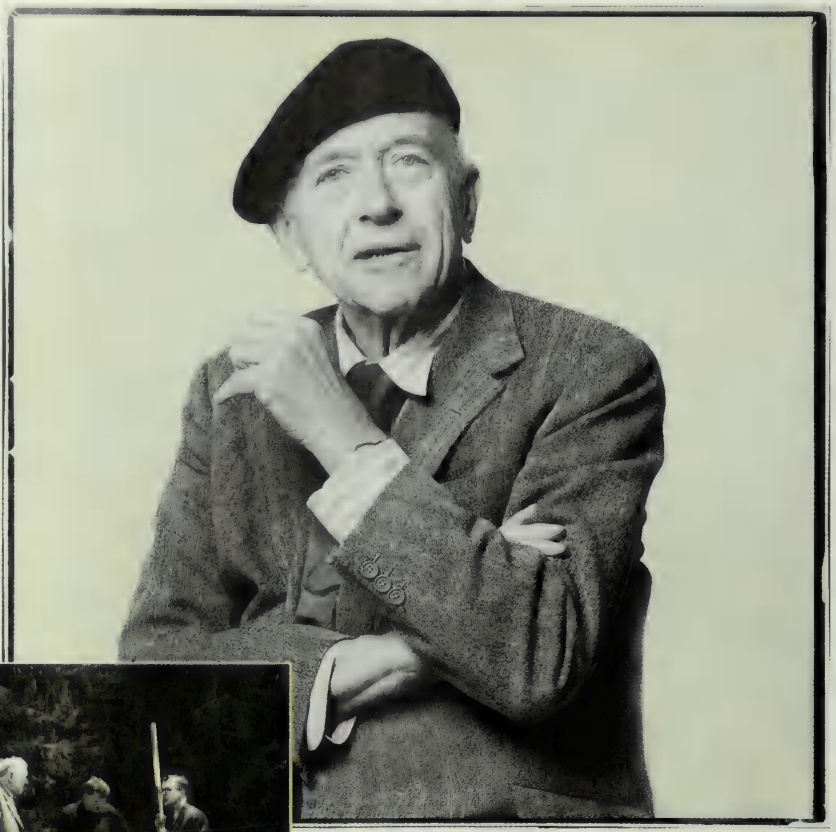
StarNet

INDEPENDENT FLOORING COOPERATIVE

www.starnetflooring.com

1-800-787-6381

CIRCLE 56 ON INQUIRY CARD



1



2

Marcel Breuer

a Memoir

A new book explores the life and tectonic craftsmanship of this modern master of materials

By Robert F. Gatje, FAIA

Hungarian-born architect Marcel Breuer made history first at the Bauhaus in the 1920s, and then later when he came to the U.S. in 1937 to teach with Gropius at Harvard. In 1953 Breuer opened an office in New York, where a host of well-known practitioners received invaluable training. Robert Gatje's memoir, just published by Monacelli Press, is a compilation of personal anecdotes and building analyses. As shown by the following excerpt, the discussion is deepened by a comparison of Breuer's architectural principles with those of the eminent 19th-century German architect and theorist Gottfried Semper.

In his recent book, *Studies in Tectonic Culture*, Kenneth Frampton investigates the 1851 writings of Gottfried Semper, the German architect whose craft-oriented theories were avidly followed by the Chicago School architects in the 1890s and recently have been the subject of much scholarly attention. As Frampton explains, Semper argued that dwellings were divided "into four basic elements: (1) the earthwork, (2) the hearth, (3) the framework/roof, and (4) the lightweight enclosing membrane." I never heard Breuer refer to Semper, although his dealings with Sigfried Giedion and his German-Swiss practice may have familiarized him with Semper's theories. Nevertheless, Breuer practiced his profession in strict adherence to Semperian distinctions.

For example, Semper's "earthwork" is both the foundation that grows out of the ground and the masonry that is supported thereon and, in turn, at least appears to support itself. Stone, whether in slabs, drums, or Breuer's trademark "rubble," is clearly part of this category; brick and concrete block are other examples. The characteristic of masonry is that its strength lies in compression rather than tension: its units will support a lot of weight if pushed down upon but will fracture if pulled apart hard enough. (Poured or precast concrete is not included since it is laced with reinforcing steel that gives it strength in tension.)

Breuer on masonry

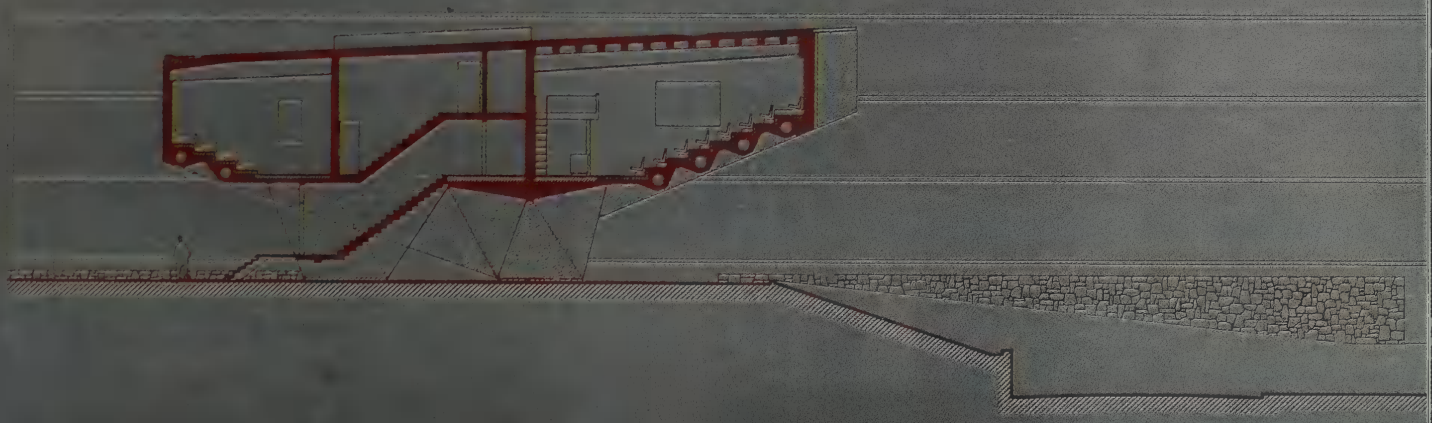
Making openings in masonry walls has always been one of architecture's greatest challenges. A slab of stone will span a relatively short distance and form a lintel over a door, window, or the space between columns, as in a Greek temple. For larger openings, the arch was invented, each element of which supports and is supported by the others (and, at its base, does its own pushing). If a designer doesn't want to see a beam or lintel over an opening in a masonry wall, it is possible to hide it—with a steel angle built into and behind the face of a brick surface, for example—but many architects are uncomfortable with this lack of "expression" in structure.

Breuer, on the other hand, avoided punching



3

Robert F. Gatje worked with Marcel Breuer for 23 years, beginning in 1953. For 11 of those years he was a partner, active in both the New York and Paris offices.



Marcel Breuer is shown in 1979 at the age of 77, two years before his death (1). In 1963 (2) Breuer (left) visits the site of the Flaine resort in France with Andre Laurenti (middle) and Gatje. In the 1930s (3) Breuer and Alfred Roth (right) collaborated in Zurich. Breuer's 1961 lecture hall at the old NYU in the Bronx (below) demonstrates his dexterity with rubble and concrete.





UNESCO advisers (including Gropius, Le Corbusier, and Breuer) at lunch in the early 1950s in Paris.

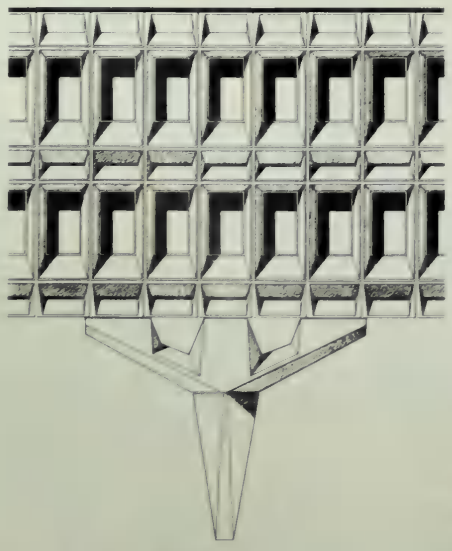
holes in masonry walls unless there was a visible lintel or roof fascia to bridge the opening and therefore, like Mies before him, tended to use stone in planes, with openings above or alongside but never below the visually unsupported units of masonry. And there are lots of steel lintels to be seen over his stone fireplace openings, where Lajkó [Breuer's nickname] instinctively pulled the lower, horizontal leg of the angles forward of the face of the stone. He said it was to keep the smoke from staining the stones above, but it gave the lintels an obvious presence.

Breuer and the craft of rubblestone

During the 1950s and 1960s, rubblestone was one of Breuer's favorite materials, both for residential work and for institutional projects such as New York University, Flaine, and Hunter College. He was very particular about the way the stone was to be laid. Each stone was to be no larger than what one person could lift (approximately 8 by 16 inches, at a maximum) and no smaller than about 4 by 4 inches (anything smaller amounted to "chinking," and Breuer preferred to see the cement joint widen rather than to fill every hole with a sliver of stone). Most stones were to be laid with their main axis horizontal; they would appear prepared to receive additional weight. A vertical stone could appear at a corner, but diagonal setting was to be discouraged, and any stone notched to form an L would be forcibly removed.

The surface was ideally cleft or flat; if the fieldstone had not been found that way, then the mason was to split it. Bulbous, rounded surfaces that protruded from the plane of the wall were to be avoided. Sharp corners were not in the nature of the fieldstones that Breuer loved; even if the stones had come from a quarry (as at NYU), the mason was expected to blunt the corners with a mallet before putting them in place. While the glory of a good rubblestone wall lies in the richness of its subtly varying colors, placing a strong reddish stone in, for instance, an otherwise tan or gray wall was not desirable. The mortar was to be slightly recessed from the face of the stones and to maintain a continuous plane that flowed around and between the stones with its width varying from no more than 2 inches to no less than a half inch. Long continuous joints, whether vertical or horizontal, were to be avoided; swooping, sinuous curves were the worst. Once a joint had passed two or three stones it was to be interrupted by a stone that would break its axis. Draftsmen and masons had to be trained, but the walls were rarely built entirely according to the Breuer rules.





The concrete cantilever of 1969 Hôtel Le Flaine (top) in Haute Savoie, France, became a trademark. Breuer's IBM La Gaude near Nice (1961–76) features a load-bearing and sun-shielding concrete facade.

Where stone meets the ground

Rubblestone is a great example of Semperian earthwork because it originates in the earth and shares its color. Breuer was perfectly content to have such a wall rise directly from the ground, since any rain-spattered dirt that might stain its surface would blend with the color of the stone. If possible, brick or dressed stone was laid on a base growing out of the concrete foundation to free it visually and literally from the dirt of the ground. If this was not possible, due to sloping ground, for instance, Breuer would call for a two-foot-wide strip of gravel at the base of the wall to absorb the rain and ease the grass-cutting. These methods of articulation between materials happened to look good, at least to our collective eye, but it's hard to say whether this was because they served a useful, practical purpose or because of their sculptural effect.

Jointing is a characteristic quality of any masonry material, and its pattern reflects its purpose and, frequently, its strength as well. If units

wallboard + mouse = nationalgypsum.com



Making expert decisions has never been simpler. Just log on to nationalgypsum.com for the most comprehensive gypsum products information on the web. Designed for ease of use, it's the only formula you need to make expert decisions, and just what you expect from the gypsum industry's service leader.

National Gypsum COMPANY

www.nationalgypsum.com
1.800.NATIONAL

CIRCLE 57 ON INQUIRY CARD





Breuer's famous exhibition house, designed for MoMA's garden in 1949, featured a rubblestone-and-brick fireplace (above). The stone in the Gagarin House in Conn. (1954) is similarly earthbound (left); the glass planes of the Van Leer headquarters in Holland (1958) show an affinity to lightweight membranes (below).

of masonry are laid with a stacked vertical joint, they don't look as if they will hold together very well, and they won't, unless they are tied back to some other structure. Brick, if used purely decoratively as a facing, often has stacked joints to emphasize that characteristic. If instead the minute vertical joints are offset in what is called a "running" bond, they appear to have greater integrity as a bearing wall, and they do. Breuer always preferred a running bond simply as pattern, and he would offset joints even in tile work, where strength was irrelevant. If we staggered the joints in a ceramic-tile wall, however, we usually let the vertical joints run through to make the decorative intent perfectly obvious.

Breuer's penchant for fireplaces

The "hearth," according to Semper, is an essential part of any dwelling, and I can't think of any of Lajkó's houses that didn't have at least one beautiful fireplace. Each was different and presented a continual challenge to his ingenuity. We made them of stone and brick, concrete and clay tile; sometimes they were part of a wall but more often they were freestanding as the sculptural symbol they certainly were. Breuer was very impressed by the "scientific" way that Americans built their fireplaces, and we were instructed to rigorously follow the proportions and dimensions listed on two pages of *Architectural Graphic Standards*. When he departed from the norm of a single, shallow opening to explore the virtues of a double-sided "see-through" version or even a totally open, round hearth—as in Hôtel A at Flaine—Breuer was insistent that we check the aerodynamics of flue and draft with a consultant.

Semper's "framework/roof" or the structural skeleton of any building becomes independently identifiable as columns and beams replace walls and slabs. Many architects feel a need to express the independent structure of a building as opposed to the earthwork on which it stands or the outer envelope that may protect it. The visible poles of a tent and the colonnades of Greek temples clearly illustrate this. There seem always to have been two warring impulses raging within the architectural world: the tendency to break apart and articulate the various parts of a building according to its purpose, and the desire to make it look all of a piece. The latter is characteristic of the great specimens of masonry construction—Egyptian pyramids, Roman arched vaults, and Romanesque churches, including the latter's revivals.



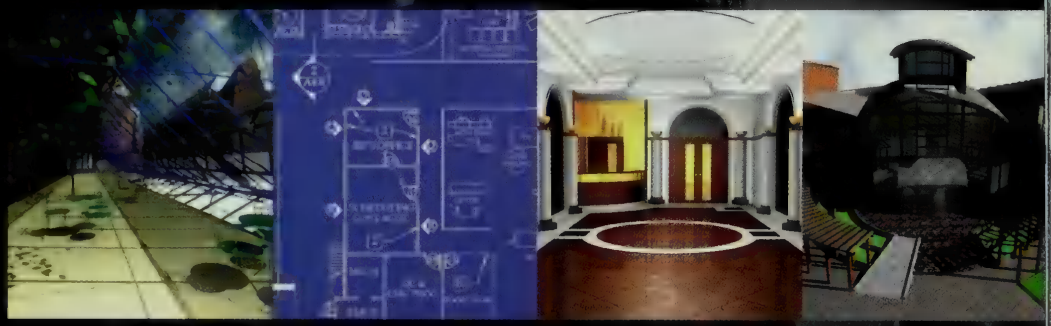
In Breuer's long career his own preferences changed. His early infatuation with lightweight metal structures was expanded to include a daring use of wood. Gradually, however, a fondness for the sculptural unity he found in masonry and particularly concrete structures took over. He loved the idea that the same concrete that was folded over the UNESCO assembly hall (1953–58) in Paris and Saint John's Abbey in Minnesota (1953–68) or warped around Saint Francis de Sales in Muskegon (1961–67) was both structure *(continued on page 116)*

www.vectorworksarchitect.com
1-888-646-4223

VectorWorks ARCHITECT

Delivers the promise of Architectural CAD





"VectorWorks ARCHITECT is a great program...I am currently getting re-trained in AutoCAD Architectural Desktop Revision 2...and it just doesn't stack up to VectorWorks ARCHITECT."
—Edward Koenig, Carmelhill Drafting Studio

Isn't it about time someone addressed the promise of CAD?
Introducing VectorWorks ARCHITECT

Engineered and built by professionals in your discipline, ARCHITECT delivers on the promise of architectural CAD. It does everything CAD was supposed to do but didn't quite. Truly a better way to design, ARCHITECT integrates Design, Production and Project Management into a system that delivers unparalleled productivity—all at a price even the smallest firm can afford.

INTEGRATION

- Complete integration of your 2D plans, 3D models, reports, schedules & client presentations
- Scalable CAD standards make it easy to structure & manage documents

DESIGN

- Unprecedented tools for programming studies and analysis
- Thousands of "Intelligent" building Objects & 2D/3D architectural symbols
- State of the art Solar Animator

PRODUCTIVITY

- An easy system for archiving, placing, & managing notes
- Automatic creation of reports & schedules
- Project Management features including issue management, error & revision control, & workgroup referencing



Special Offer to Readers of *ARCHITECTURAL RECORD*

Save over $180 by purchasing VectorWorks ARCHITECT direct for $1395 or without photorealistic rendering for $1140. Includes FREE Tech Support and a 90-Day Money-Back Guarantee.
*Existing VectorWorks users call for upgrade pricing.

NEMETSCHEK
NORTH AMERICA

CIRCLE 58 ON INQUIRY CARD

MARCEL BREUER: A MEMOIR *continued from page 114*

and envelope. One disadvantage of moving his practice from Europe to the United States was that the relative cost of labor and materials was reversed: labor for building wooden formwork was cheap in Europe, while steel was frequently in short supply and often costly; in America, steel was plentiful but unionized construction workers were well paid. Breuer knew the economic logic, but even in America, he always preferred concrete as something he could mold and show with pride.

As for roofs, Breuer had an obvious aversion to the hips and gables of traditional architecture—he had learned the language of van Doesberg and de Stijl too early to give it up later. His houses were almost always capped with a single plane faced in one strong white band of fascia board. It might be bent or inclined in a butterfly or shed roof, but it rarely showed its graveled surface and never ended in a pediment. Breuer's larger institutional buildings end with the horizontal line of a parapet or the narrow metal edge of a gravel stop. In relying upon interior drains and even arguing for the perfectly flat roofs made possible by improved roofing membranes, Breuer was avoiding the gutters and drainpipes of his European youth, and he missed the characteristic rooflines of a romantic past not one whit.

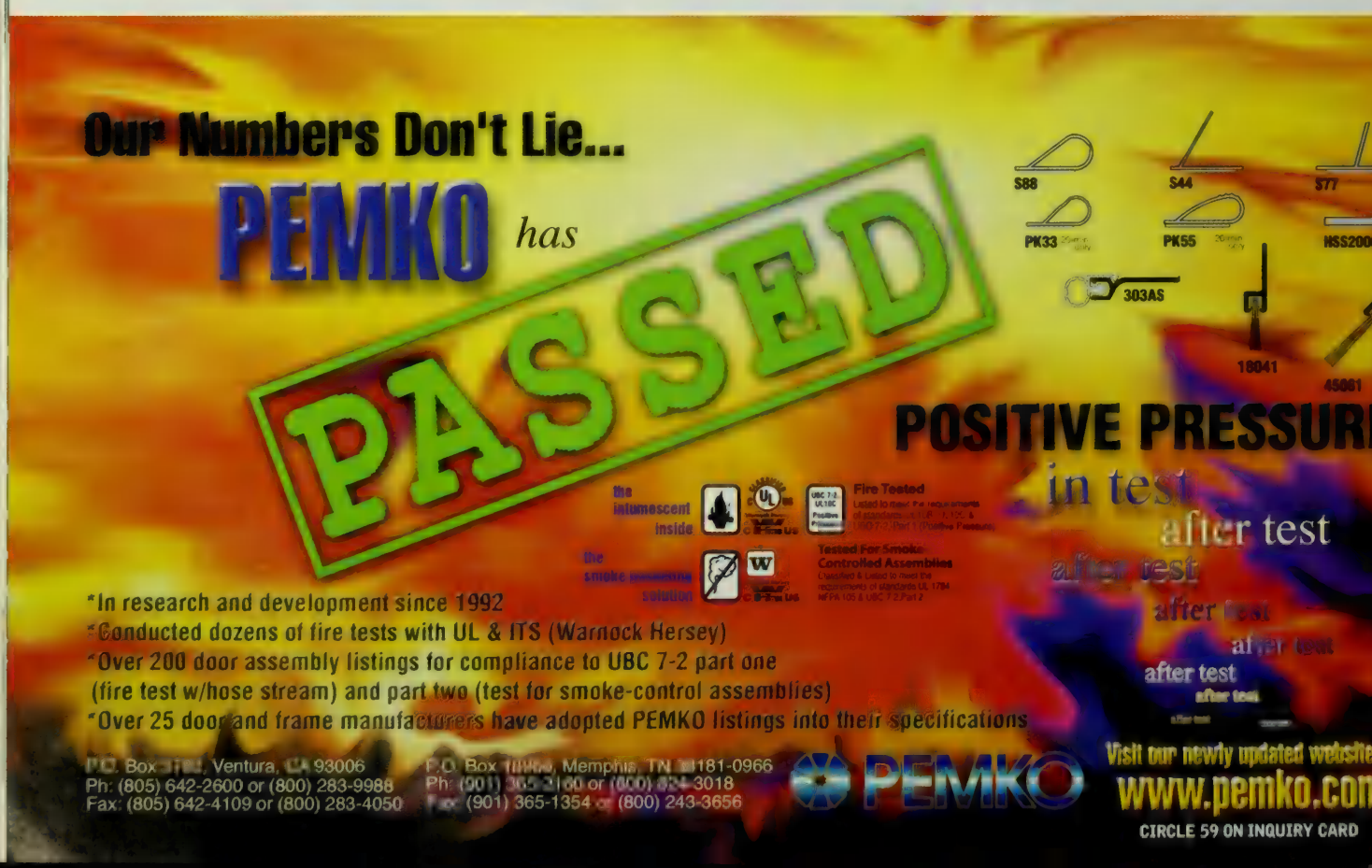


Breuer and his wife, Connie, at their first house in New Canaan, circa 1947.

Breuer and enclosure

Semper's "lightweight enclosing membrane" has been considered one of the principal characteristics of modern architecture, although it has existed throughout history in the skins and woven fabric of even the simplest shelters. The "threads" making up the fabric of a modern curtain wall (though Breuer never used this terminology) might be the relatively heavy post and lintel of a precast-concrete window frame. Yet their pattern was always to be respected and never broken for fear that the fabric might visually tear. When Breuer designed a glass curtain wall, he tried to make the threads of its fabric as thin as possible, as in his infamous sliding windows that attempted to do away with most of the frame surrounding the slider. For him, glass was a void that contributed to lightness and transparency. He fought the use of dark-tinted glass, despite its heat-saving qualities, and never used reflective glass.

If Breuer had to pierce the fabric of one of his curtains, he made sure to reinforce the opening, as he did in passing through the hexagonal stained-glass drapery of Saint John's Abbey; otherwise the curtain was either hung from the upper structure—found at Armstrong Rubber in Westhaven, Conn. (1969), and at the HEW headquarters in Washington (1969)—or it was edged along its bottom with the hem of a heavy beam. Lajkó rarely explained what he was suggesting, and we rarely questioned it. His sympathy for Semperian principles, even if he had never encountered them, was a natural one. ■



Roppe: The One Source

Working with you to create environments for today, and for tomorrow.

Our Three Cove Base Lines Meet All The New Specifications

When it comes to wall base, Roppe is still the leader. We offer all 3 separate types of cove base defined in the new ASTM cove base specification F-1861:

- Type TS—Thermoset Vulcanized SBR Rubber
- Type TP—Thermoplastic Rubber
- Type TV—Thermoplastic Vinyl

New Accessories Always

We offer the largest selection of accessories in the industry, to provide you with the perfect finishing touch for every installation.

More Colors, More Freedom

In addition to our 25 MatchMates "all-product" colors, you'll find one of the widest color selections in the industry. And, you'll find it in every line—from our cove base, to tile, to treads, to accessories. For ever-popular "basics" to the latest warm and cool shades, you'll find colors that give you the freedom of choice you need.

New Products, More Options

New Fiesta™ Tile & Treads

Beautiful, durable, and unique! Our new Fiesta™ tile and treads offers the rugged durability of rubber with a contemporary, playful look. Mix and match colors with our other products for even more fun.

9 Foot Stair Treads

For long stairs that have always been difficult to cover, a seamless tread installation is now a reality. Roppe offers rubber treads in lengths of up to 9 feet, with:

- Color selection (all the same colors as our other rubber treads!)
- Cost savings (no more cutting and piecing)
- A better finished look (no seams)

providing problem-solving and enhanced beauty for many installations.

AlphaBase

This unique product was designed with safety in mind...for schools, hospitals, dormitories, public buildings...anywhere you need to show exits and escape routes out of buildings. You also have the option to order it with any kind of signage you desire—including names and symbols—in any color you require.

Custom School Logos

You can make your school unique by having your own special school logo right in the floor! We can provide any design, in any size, plus we can match your school colors. (Pictured: Eastwood High School, Pumberville, Ohio (*Eastwood Eagles* logo custom color match).

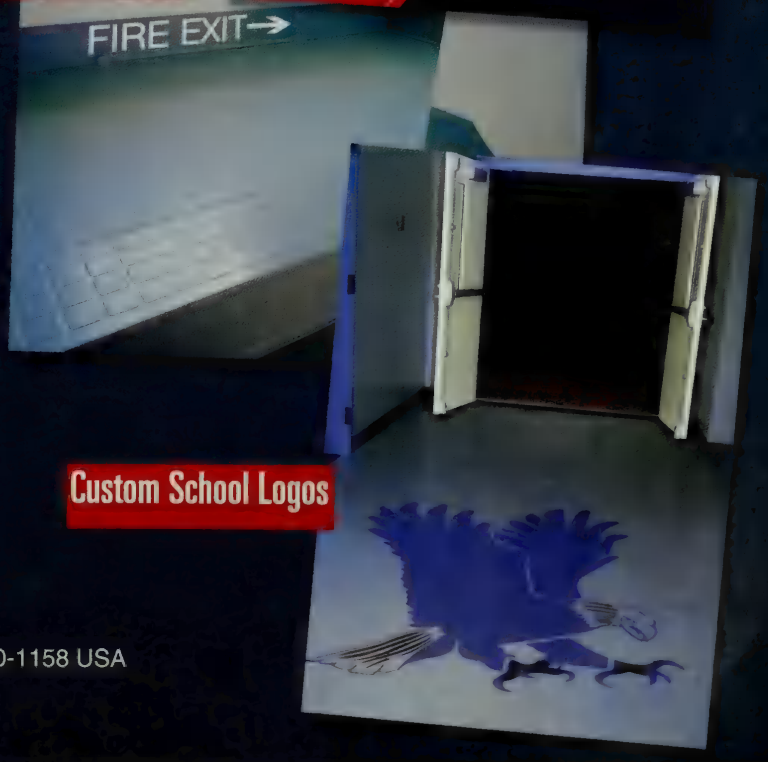


9 Ft. Treads



Fiesta Tile & Treads

AlphaBase



Custom School Logos

Roppe CORPORATION

CIRCLE 60 ON INQUIRY CARD

1602 N. Union Street – P.O. Box 1158 • Fostoria, OH 44830-1158 USA
419-435-8548 • FAX: 419-435-1056 • 1-800-537-9527
For Samples Call Toll-Free 1-877-SAMPLE4 (726-7534)
www.roppe.com • Email: sales@roppe.com



The 322,000-gallon deep-sea tank (this page) recreates an Atlantic Ocean habitat.

The aquarium sits along the Cooper River, near the city's working waterfront (opposite).

After many delays and much controversy, the **SOUTH CAROLINA AQUARIUM** takes a contemporary stance on the Charleston waterfront

By Lynn Nesmith

Charleston is a proud city. So when a couple of local boys beat out the likes of Michael Graves, Antoine Predock, Emilio Ambasz, and Esherick, Homsey Dodge & Davis in a high-profile design competition for a new aquarium, it was encouraging news to everyone in Charleston and architectural underdogs around the country.

But winning isn't everything, as W. G. Clark and Charles Menefee would eventually find out. In 1985, Clark & Menefee and their New Orleans–based competition partner, Eskew Vogt Salvato & Filson Architects landed the commission for the South Carolina Aquarium. Ten years later, though, after a programming, design, and contracting process of marathon proportions, Clark & Menefee relinquished any association with the project. Its New Orleans partner (now reorganized as Eskew +) took over the project.

No one could have predicted the obstacles that would arise. There would be program changes, firm reorganizations and breakups, construction disputes, lawsuits and countersuits, toxic contamination, and ultimately the death of Calhoun, the aquarium's celebrity green sea turtle, just weeks before the aquarium was scheduled to open.

A mayor's stubborn dream

The project began in 1983 when there was no program, no budget, no site, only one politician's dream. But Joseph P. Riley, Jr., a popular mayor who was then in his second term in office, is a determined man with considerable architectural understanding and city-planning vision. With his family, he had visited the Shedd Aquarium in Chicago and thought Charleston needed a similar civic structure. A politician's idea and a little city council funding ($25,000, in this case) for a feasibility study are rarely sufficient to launch a major work of public architecture. But Mayor Riley understood the power of civic architecture and extolled the aquarium as educational and inspirational. "Its higher goal was always to enrich the people of the community, not be a mere tourist attraction," explains Riley, who is still mayor of Charleston 17 years later.

Plans focused on a midsize aquarium, approximately 30,000 square feet, to be devoted to the understanding and conservation of the state's aquatic habitats, from mountain streams and black river bogs to tidal salt marshes and the depths of the Atlantic Ocean. Located close to the city's historic center, it was to be part of a large mixed-use development and was initially budgeted at between $6 million and $9 million.



The project's first proposed location drew immediate opposition from local residents and city preservationists, a harbinger of things to come. (In Charleston, which enacted America's first municipal preservation ordinance in 1931, a little resistance can lead to long delays or death for new buildings.) Undaunted, the city studied other options, including a five-acre waterfront site a dozen blocks north of its historic core.

Finding an architect

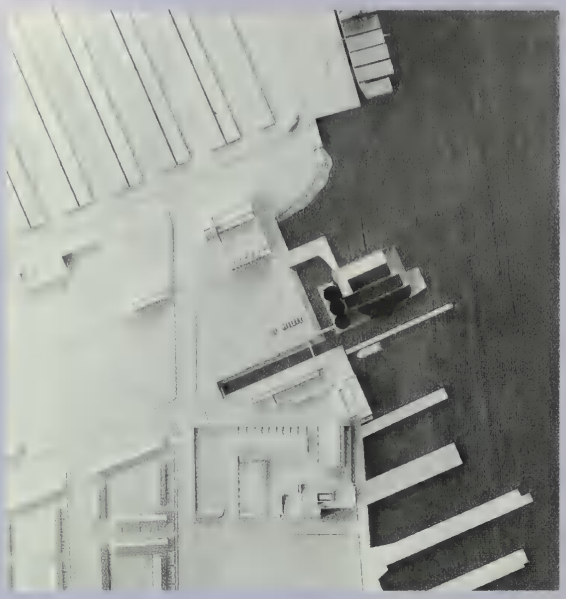
Optimistic that the city had found an appropriate location for the aquarium, Riley turned his attention in 1985 to the project's architecture. Although admired for having raised the city's collective design consciousness in terms of new projects as well as historic preservation, Riley found the aquarium to be a real test of his powers of persuasion.

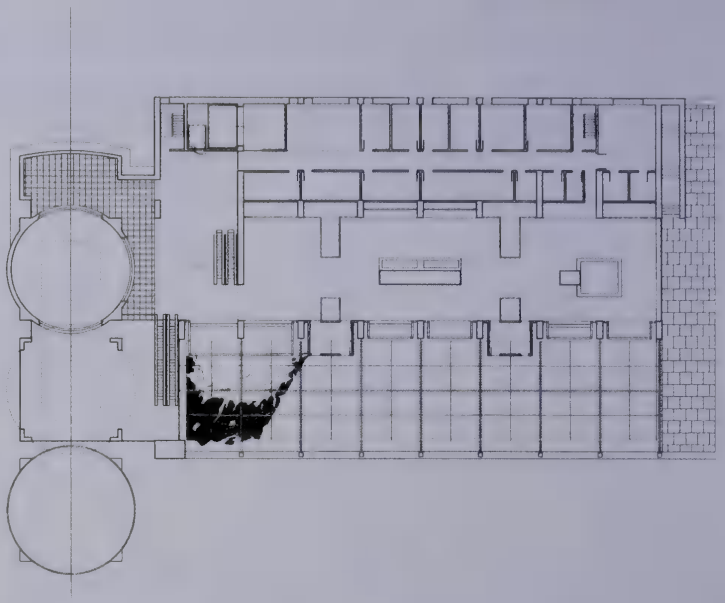
With $42,420 from the National Endowment for the Arts to hold an invited design competition, the mayor set out to get national exposure for his pet project by bringing star architects to town. The competition was structured as an intensive three-day charette in Charleston with details of the program withheld until the start of the session.

By a strong consensus, the scheme by Clark & Menefee was selected. In a bold response to the program and site, the design proposed

Lynn Nesmith is a former editor of Southern Living *and* Architecture *magazines. She is the author of* Instant Architecture *and monographs on California architects Steven Ehrlich and Rebecca Binder.*

Project: *South Carolina Aquarium Charleston, S.C.*
Architect of Record: *Eskew + (formerly Eskew Filson Architects—R. Allen Eskew, AIA, principal-in-charge; Chuck Hite, AIA, project manager; Bob Kleinpeter, Gary Hoffman, Ann Glenn, Chris Brooks, project team*
Associate Architect: *Clark & Menefee*
Engineers: *Davis and Floyd (civil); Schoolbred Engineers (structural); Morphy Makofsky (foundation); Blum Consulting Engineers (m/e/p); Enartec (animal life support)*
Consultants: *Lyons/Zaremba (exhibit design); the Larson Company (habitat design)*
General Contractor: *Ellis-Don*





An island scheme that caught the competition jury's attention

The design submitted by South Carolina–based Clark & Menefee and its New Orleans partner Eskew Vogt Salvato & Filson to the 1985 competition for the aquarium featured a building rising from an islandlike platform in the Cooper River and connected to land by a pedestrian bridge. The scheme envisioned the aquarium as a series of terraced gardens with a public park on the lowest level and screened aviaries above. Three inverted copper domes were to front the building and reflect sunlight to the public spaces below them. While much of the original scheme remains in the completed building, the aquarium sits on a pier, not an island, and the domes have been replaced by a pair of butterfly roofs above aviaries on the front and back of the building.

a structure that would project into the water as an urban island and connect to the land with a footbridge. The trapezoid-shaped building was organized as a series of terraced gardens embracing the Cooper River and its shoreline, with the lowest level a public park and terraces above serving as screened aviaries. Inverted copper domes crowned the entrance hall and reflected sunlight down into public spaces.

Raising the money

Unlike Chattanooga, Tenn., and Monterrey, Calif., which had both built aquariums, Charleston didn't have the luxury of philanthropic families or business leaders actively lobbying and raising money for its project. So Mayor Riley led the fund-raising campaign himself. Thanks to his relentless fight, the South Carolina legislature approved $9.5 million to build a state aquarium in 1988, on the condition that Charleston form a nonprofit board to run the facility. In November of that year, city voters passed a $9.5 million bond referendum for additional funding, by a margin of 3 to 1. With the National Park Service in possession of the five-acre waterfront site on Calhoun Street and with financial backing in place, it appeared that the mayor's wish was going to come true.

In the meantime, the city hired Rhodes/Dahl, a firm that specializes in aquarium project management, to oversee the aquarium and assess the exhibitions. From 1986 to 1989, the program expanded and the building grew to 68,250 square feet, pushing the budget to around $24 million.

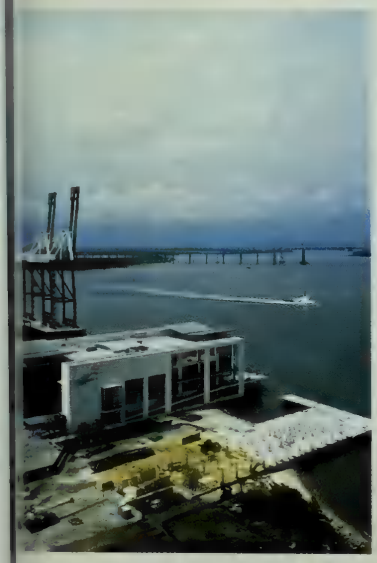
Incorporating these changes, Clark & Menefee developed numerous new schematic designs, in association with Eskew Vogt Salvato & Filson. Eventually exhibition designers Lyons/Zaremba joined the team. "Now we had a real program and exhibitions with a clearly established story line of the waters of South Carolina," recalls Allen Eskew. "The designs were constantly changing during this time in response to specifics of the program, exhibitions, and expanded educational mission." The building became less of an island and acquired a more anchored footing on the waterfront, while still projecting roughly 200 feet into the river. In the fall of 1989, even Hurricane Hugo didn't put a damper on public enthusiasm and support for the aquarium. That November, county voters approved another $7 million for the aquarium.

In 1990 Charleston's board of architectural review endorsed the revised scheme and the building was granted a four-foot variance allowing a 68-foot-high structure. Groundbreaking was scheduled for late 1990, until "a small amount of foul-smelling goo" was discovered on site. The ramifications of that discovery led to a quagmire of legal, environmental, and engineering tribulations. It turned out the stench came from toxic creosote left from a coal-conversion plant that had produced power used to illuminate the city's gas streetlights before the Civil War.

With the entire area a possible Environmental Protection Agency (EPA) Superfund site, intensive environmental testing was required. "The mayor was steadfast," recalls Steve Livingston, Charleston's parks director since 1976. "He acknowledged a civic duty, asking, 'Who is better able to clean up a toxic EPA site than a public agency devoted to education and conservation of the environment?'" As the scope and cost of the cleanup grew, so did the size of the aquarium (nearly 90,000 square feet) and its price tag (about $42 million).

During this period, Clark & Menefee, in association with Eskew Vogt Salvato & Filson, constantly revisited the schematics. "To keep track of all the revisions we labeled each progressive scheme with a letter," recalls project manager Chuck Hite, AIA. "The K scheme was the final design."





A glass-and-metal cube (above and right) anchors the city side of the aquarium and houses a mountain-habitat exhibit. An enclosed terrace on top of the cube is protected by a butterfly roof.





1. *Aquarium*
2. *Retail/food*
3. *Imax/food*
4. *Residential*
5. *Symphony hall (future)*
6. *Parking*

The South Carolina Aquarium is the latest in a series of projects designed to reclaim Charleston's waterfront for public use. During his 25 years in office, Mayor Joseph Riley has helped establish a string of nearly four miles of open land and parks along the city's peninsula, defined by the Ashley and Cooper Rivers.

Some of these projects are recreation facilities, such as a 6,000-seat minor-league baseball stadium nestled in a 10-acre park along the Ashley River, which opened in 1996, and a nearby 320-foot public pier for fishing, crabbing, and boat docking. Other projects offer open space for more passive pursuits. For example, the city's beloved 11-year-old Waterfront Park, a landscape of fountains, gardens, promenades, and shaded outdoor rooms with seating, has revived a section of the old commercial waterfront that was once slated for private high-rise redevelopment.

Between Waterfront Park and the aquarium, the Charleston Maritime Center is nearing completion. Designed to help preserve the city's working waterfront and seafood industry, the Maritime Center will offer docking facilities, a public pier, and markets for the city fishing fleet.

In the immediate vicinity of the aquarium is the new four-acre Liberty Park, which serves as a grand front lawn for the building. Built and managed by the National Park Service, Liberty Park is also the gateway to the new Fort Sumter tour boat docks and concessions. Shops, restaurants, and an Imax theater are also nearing completion nearby. Another long-term project, still in the idea stage, is a proposed symphony or concert hall on a large vacant parcel to the southwest of Liberty Park. *L.N.*





The aquarium is organized into a series of layers, moving from sunlit outdoor areas to progressively darker exhibit spaces. Exterior ramps, stairs, and terraces allow visitors to move back and forth from outside to inside, reducing museum fatigue.



As construction documents were being developed in the mid-1990s, firm roles, personnel, and responsibilities were undergoing an upheaval. By the time construction began, the New Orleans firm was renamed Eskew +, as Allen Eskew separated his practice from his former partner Ron Filson and took the aquarium project with him. Meanwhile, 10 years of controversy and design changes had taken a toll on Clark & Menefee, which decided to relinquish all control over and association with the project. Indeed, the firm moved to Charlottesville, Va., where W.G. Clark took a teaching position at the University of Virginia. Although obviously proud of the original scheme (which is included in a new monograph on his firm), Clark recently told RECORD he did not want to be quoted regarding the completed building or why he withdrew.

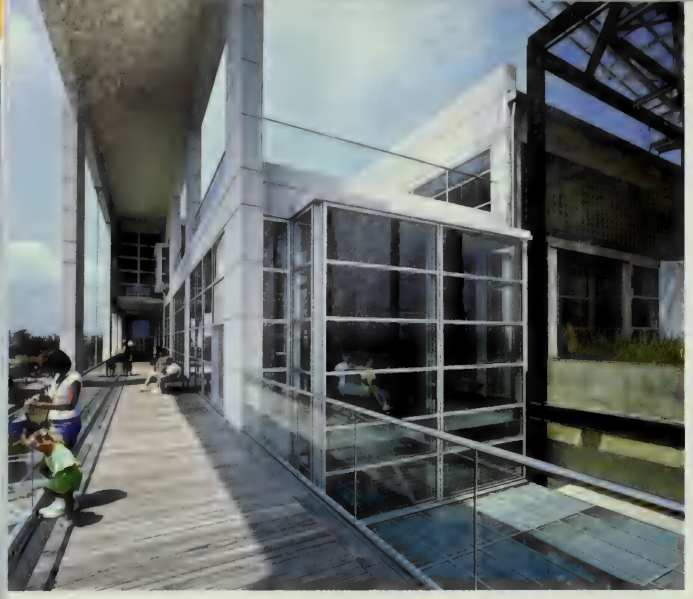
When the EPA and National Park Service approved the site in 1995, the worst seemed over. The extent of the pollution and scope of the cleanup, however, were more than the city had bargained for, and incorporating a sophisticated toxic-containment system and building the foundation to support the weight of huge fish tanks took longer than expected. More than a year after construction began, only 22 of the 349 structural foundation pilings were in place and the opening date was pushed back. Even the mayor was getting a little frustrated.

Two years into the construction phase, the city sued the general contractor, Ellis-Don, for disputed claims, and Ellis-Don countered with its own lawsuit. The grievances centered on schedules, cracks in the foundation, and earthquake standards. Although the architects were removed from the thick of the legal proceedings, a black cloud still seemed to hover over the project.

Perseverance pays off

In May 2000, the South Carolina Aquarium finally opened, presenting a contemporary design to a city that overwhelmingly favors the traditional. Unlike many modern building of recent vintage that wear their style on their sleeve, the aquarium is more discreet. But that's not to say it is modest. In a city of architecture scaled to life in the 18th century, this muscular new building more than holds it own on the waterfront. Its $47 million construction budget makes it the city's largest public project ever.

The aquarium is a poured-in-place concrete structure sitting on a concrete pier raised above the Cooper River. An outer steel skeleton supports the building's front and back "screen" porches. "The original

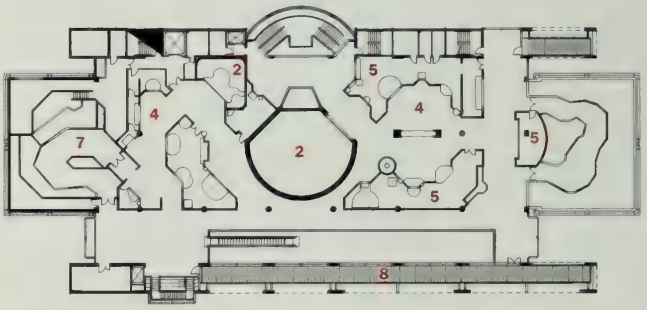


A long curtain-walled lobby (below) uses daylight to help orient visitors. The lobby floor is patterned terrazzo that recalls the state's land and water formations. The two-story stained-glass window above the entrance to the building (below right) is the work of artist Ellen Mandelbaum.

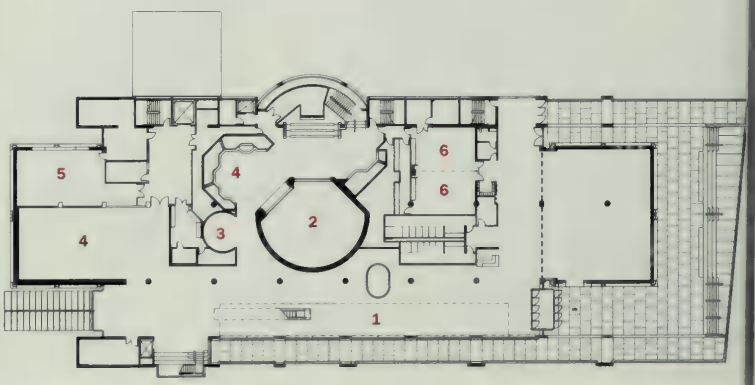


THIRD FLOOR

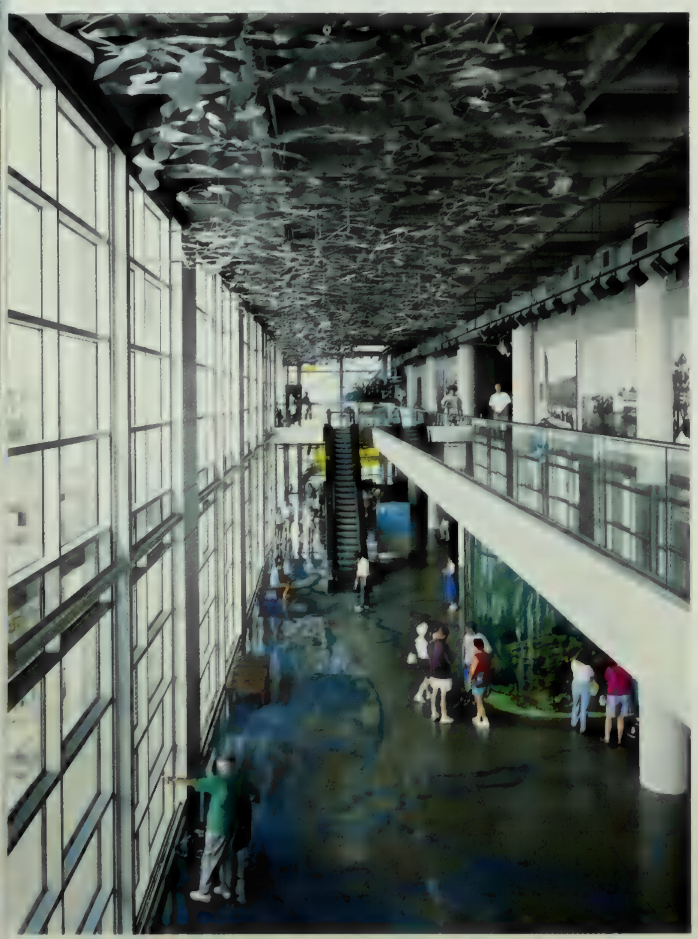
N 0 30 FT. 9 M.



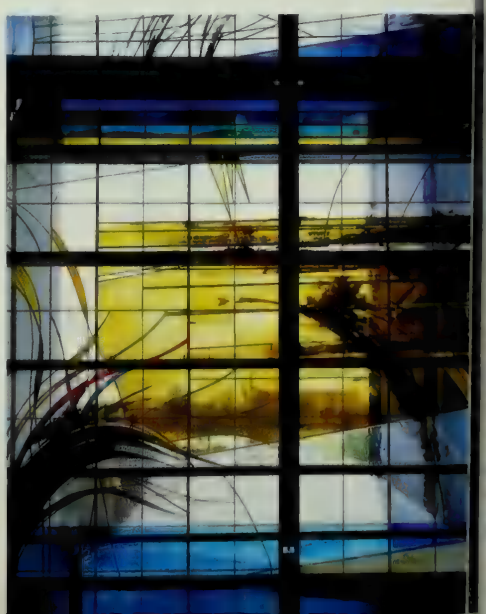
SECOND FLOOR



FIRST FLOOR



1. *Lobby*
2. *Tank*
3. *Theater*
4. *Exhibition*
5. *Service*
6. *Classroom*
7. *Aviary*
8. *Exterior balcony*
9. *Administration*
10. *Boardroom*
11. *Staff lounge*
12. *Air handling*







The 93,000-square-foot aquarium has more than 60 exhibits taking visitors through five major regions found in South Carolina: the Blue Ridge Mountains, the Piedmont, the coastal plain, the coast, and the ocean.

concept called for a structure that extends into the river," explains Eskew. "That was a key determining factor in the organization of the building and the entire site."

Although the design of the aquarium is decidedly contemporary, it makes reference to Charleston's distinctive architectural traditions. For example, the long ramp that runs along the south side of the building and serves as the grand approach recalls the city's typical "single" house, which features an entrance-hall veranda running along one side (to catch the breezes). "We viewed the ramp as the transition from land to another world," explains Eskew. The aquarium also follows the classical notion of a temple set on a pediment. And such a scheme responds to tougher codes imposed after Hurricane Hugo in 1989, which required, in this case, that the building sit at least 16 feet above sea level.

This unsentimental stance continues inside. The building is not soft or delicate. Unlike other aquariums that turn inward, this one opens up and merges on many levels with the outdoors. Although dark rooms invite visitors into an encompassing mountain cave or the deep blue of the ocean tank, the aquarium is no black box. At various points throughout the facility, visitors can take breaks from the exhibition areas and go outside. In this way, the building obliterates the distinction between indoors and outdoors and dissolves a sense of enclosure—a rare strategy for an art museum or building devoted to exhibition space. But the building treats the Cooper River as a prized part of its collection.

Breaking most rules of circulation, the building unfolds as a promenade that meanders like a slow-moving, low country river, changing from cloistered narrow passes to broad expanses of big water—not exactly the conventional strategy for moving large numbers of visitors through exhibition spaces. "We've established paths of least resistance," says Eskew. "And they work." When patrons step out of the gallery sequence into the two-story lobby, the shift doesn't disrupt the flow but encourages a more relaxed procession through the aquarium. The open verandas, promenades, and impromptu seating areas offer dramatic views of water, landmark bridges, and the city's working cargo terminal.

Since the aquarium's opening in May, the public and the press have celebrated it. Like any building in Charleston that takes even the slightest contemporary stance, the aquarium has had its detractors. But outcries over the budget, delays, traffic, and impact on the historic district have settled down and attendance in the first four months has greatly exceeded expectations.

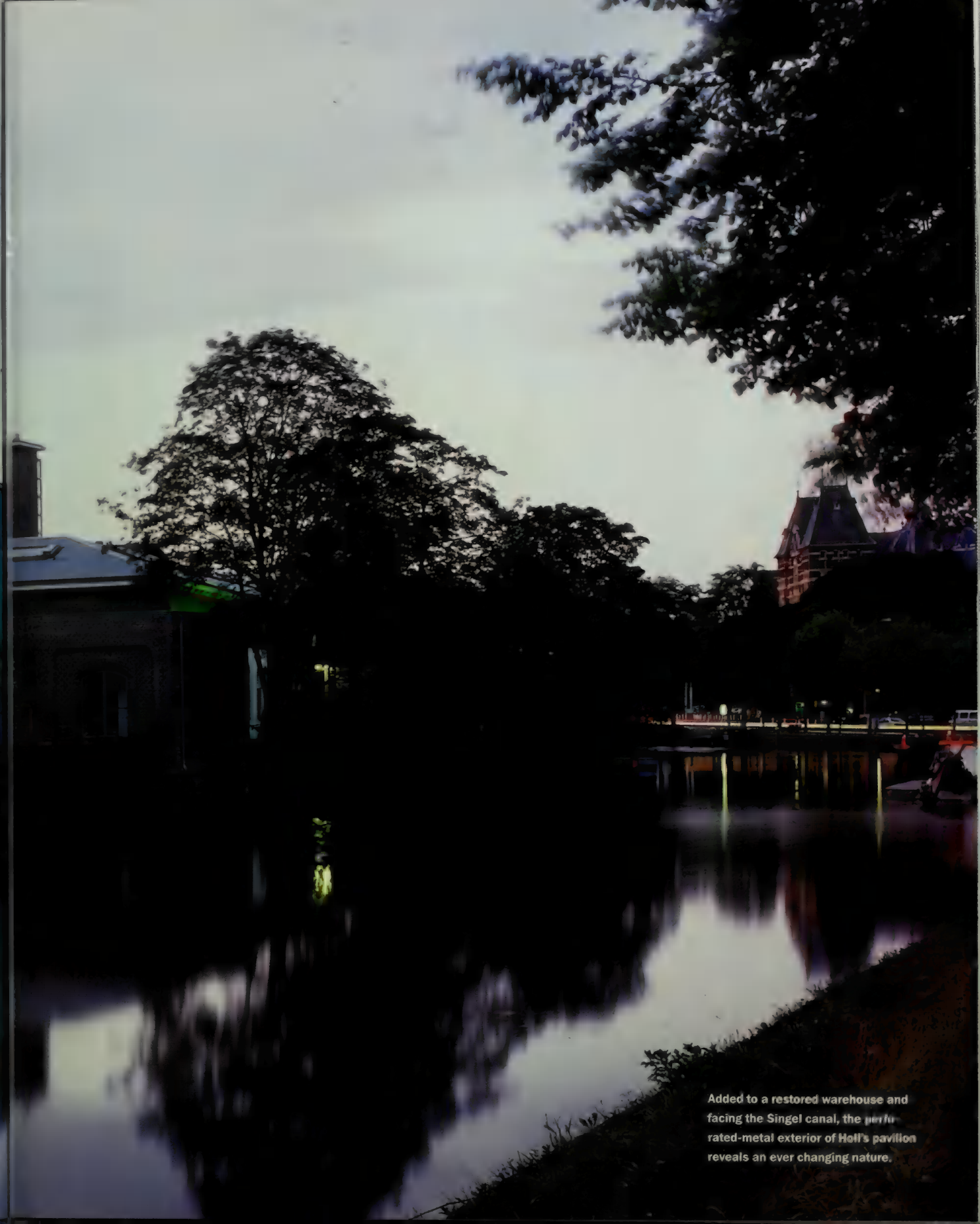
Mayor Riley maintains that an appreciation of art is universal and integral to everyone's happiness, regardless of a person's income, education, or social background. "Great architecture lifts the human spirit," says Riley. He also believes the degree of public access to the water is a measure of a city's quality of life. "All the truly great cities of the world embrace their waters," he explains. The South Carolina Aquarium is Riley's latest effort to embrace the rivers that run through his city. ■

Sources
Curtain wall: *Kawneer*
Exterior wood decking: *Pau Lope*
Elastomeric roofing: *Siplast*
Skylights: *Supersky*
Acoustical ceilings: *Armstrong*
Custom wood work: *Charleston Woodworks*
Paints and stains: *Themec, Zolotone, ICI*
Interior ambient lighting: *Light Lab*
Tank lighting: *Tames, Sterner, Hydrel, USI-Columbia*
Lighting controls: *Lithonia*
Elevators/escalators: *Schindler*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**

Light is again Steven **Holl's** chosen medium, wielded to change the way we perceive architecture in a pavilion for **HET OOSTEN**





Added to a restored warehouse and facing the Singel canal, the perforated-metal exterior of Holl's pavilion reveals an ever changing nature.

By James S. Russell, AIA

Common to the work of a number of architects today is a desire to liberate architecture from the stasis of conventional construction. They want to dissolve its substance, to allow it to react in some way to a world that is understood by people in a different, less material-bound way. They seek contemporary architectural metaphors that speak to the more virtual and less place-based ways in which the fundamental transactions of life are now occurring.

Steven Holl thinks of his headquarters for Het Oosten as offering "a phenomenological experience of space," one intended to change the way the viewer perceives architecture. Like other contemporary architects (Daniel Libeskind comes to mind), Holl has looked at mathematical and artistic systems that can be applied to make, as he puts it, "a thought-to-feeling" bridge via architecture. The medium he uses in these explorations is one common to the visual arts and architecture: light.



Even in early studies (above), Holl looked at the pavilion's ability to pick up and refract light, and he considered the reflective potential of the Singel canal. The pavilion's ambivalent materiality contrasts with the sober solidity of the adjoining warehouse (opposite).

To use light in architecture is old news, but its most gifted masters have orchestrated its effects—carving what we see out of the contrast of light and shadow, evoking a sense of mystery.

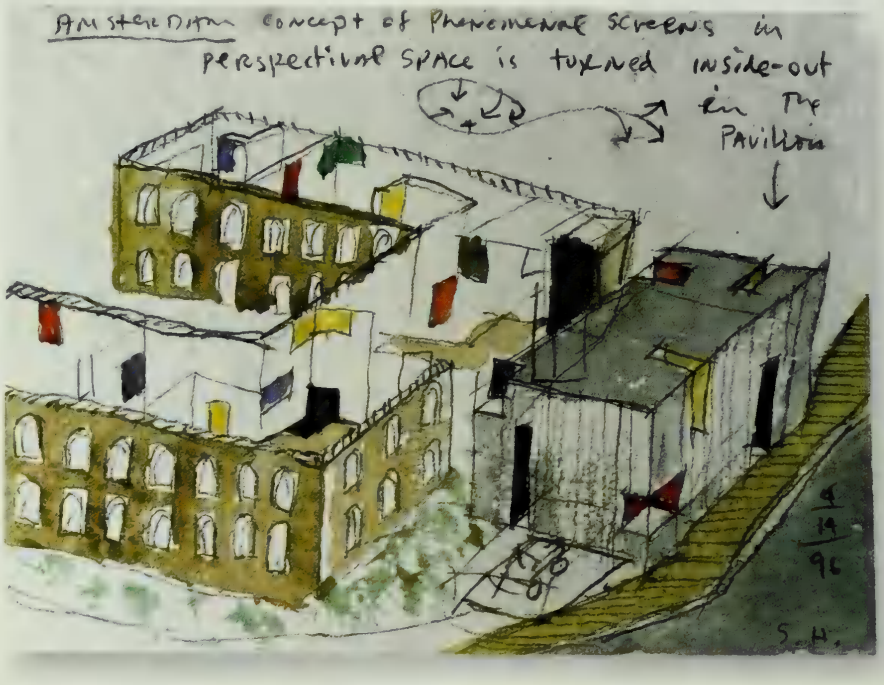
Holl first shaped architecture to give substance to light in the unlikely confines of an office interior within an anonymous New York City office building, the headquarters for D. E. Shaw [JUNE 1992, page 114]. Apertures with layered, back-painted surrounds split daylight into its constituent colors and refracted it into glowing beams. Light became even more palpable in the St. Ignatius Chapel, in Seattle [JULY 1997, page 40]. Here, metaphorical "bottles" gather light through tinted glass, which is further shaped by refracted planes of paint. Depending on the presence of sun or the time of day, they alternately spread Jello bright beams of precisely delineated color across the rough-troweled walls or appear to fill the space with a soft mist of blended tone.

To take light as the substance of architecture is, in the context of Amsterdam, to beg comparison to the masters of the medium, painters like Vermeer and Jan van Eyck, whose awe-inspiring works were reliant on the region's limpid sunlight. And yet as Holl's new pavilion comes into sight across the Singel canal, the viewer is instantly struck by its unique power. It is a simple cube, punched with what look like random openings. Subtle washes of gray-green color move across the surface, while dabs of bright orange and fluorescent green wink on and off. As one looks closer, the very borders of the cube blur. This relatively small structure, only 65 feet on its longest side, emanates an eerie power.

Project: *Headquarters for Het Oosten, Amsterdam*
Architect: *Steven Holl Architects—Steven Holl (design architect), Justin Korhammer (design and project architect), Hideaki Ariizumi, Martin Cox, Annette Goderbauer, Yoh Hanaoka, Heleen van Heel (team)*
Associate architect: *Rappange & Partners Architecten*
Engineers: *Ingenieursgroep Van Rossum (structural); Technical Management (electrical, mechanical)*
Consultants: *L'Observatoire International (lighting)*



This pavilion, along with the restored building that adjoins it, offers the client a singular architectural image at a time of fluidity in its corporate identity. This apparently paradoxical combination is exactly what the company wanted. Het Oosten builds and manages both social and private-sector housing in Holland. With state involvement rapidly waning in the once heavily protected arena of housing, the nonprofit company found it had to transform itself to survive in a fast-changing business environment. Although it had staked out a new niche building in-city housing and live/work spaces for artists, changing tastes and evolving competitive pressures made predicting the future—and predicting the way the company will be structured—an iffy proposition. Housed in an inadequate building on the outskirts of the city, the company purchased a turn-of-the-century U-shaped structure. Built as a mere warehouse for military medical supplies, the building had the nobility and detail of a neoclassical palace. It was not an obvious choice for a constantly reorganizing company. "We wanted a building that was strong architecturally," explained Leo Versteijlen, Het Oosten's head of project development, "but one in which we could move people around without having to constantly alter the building itself, as we had to in our previous headquarters."



Although altered by Holl, the pavilion (opposite) resembles the Menger sponge, an infinitely multiplying mathematical construction that begins with each side of a cube being divided into nine equal squares, the middle square of which is punched out. In an early study (above) he explored how to extend the idea into the existing structure on the site. The podium (opposite top) rises to pick up vehicles, which are then robotically conveyed to an underground car park.

Holl, with Rappange & Partners, a local firm specializing in historic preservation, cleared away dropped ceilings and layers of office partition in the old building, revealing an elegantly proportioned interior that permitted considerable flexibility for rearrangement and growth. Making the building a suitable and adaptable workplace primarily involved cleaning and restoring interior surfaces and updating the mechanical systems.

What did not fit within the old envelope was a large dining area; the company wanted such a space that could be readily converted for a variety of activities, from meetings to informal receptions to public performances. It was here that Het Oosten, with its involvement in innovative housing architecture (the WOZOCO housing, by MVRDV, being the most daring recent example, *see* JULY 2000, page 141), asked Holl to develop an addition that would give the company a unique and visible identity. "We've learned in our housing projects that buildings must speak to people emotionally to succeed," says Versteijlen. He saw

HOLL GIVES LIGHT REAL SUBSTANCE, RECKONING WITH IT AS FORM.

the connection in Holl's work through "beautiful handrail details and stair details. He makes an ornament out of a simple door."

Holl's working method was inspired by such mathematical constructions as the Menger sponge, which, through the systematic removal of part of its volume, had the paradoxical result of increasing its area. He also was influenced by Morton Feldman, a 1950s avant-garde composer who developed a new musical language by defining parameters within which chance would dictate the music produced.

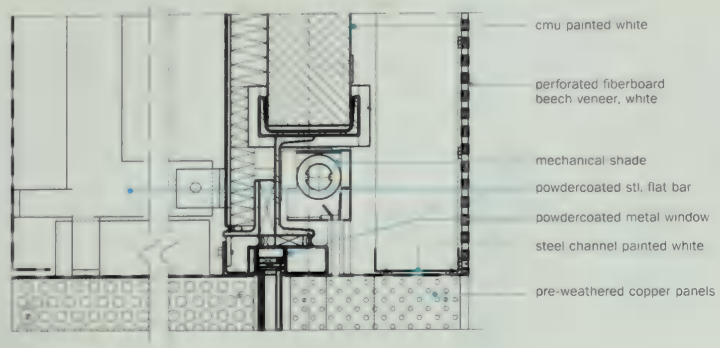
The resulting design visually resembles a Menger sponge and is in part the result of Feldman-esque chance operations. Before such a



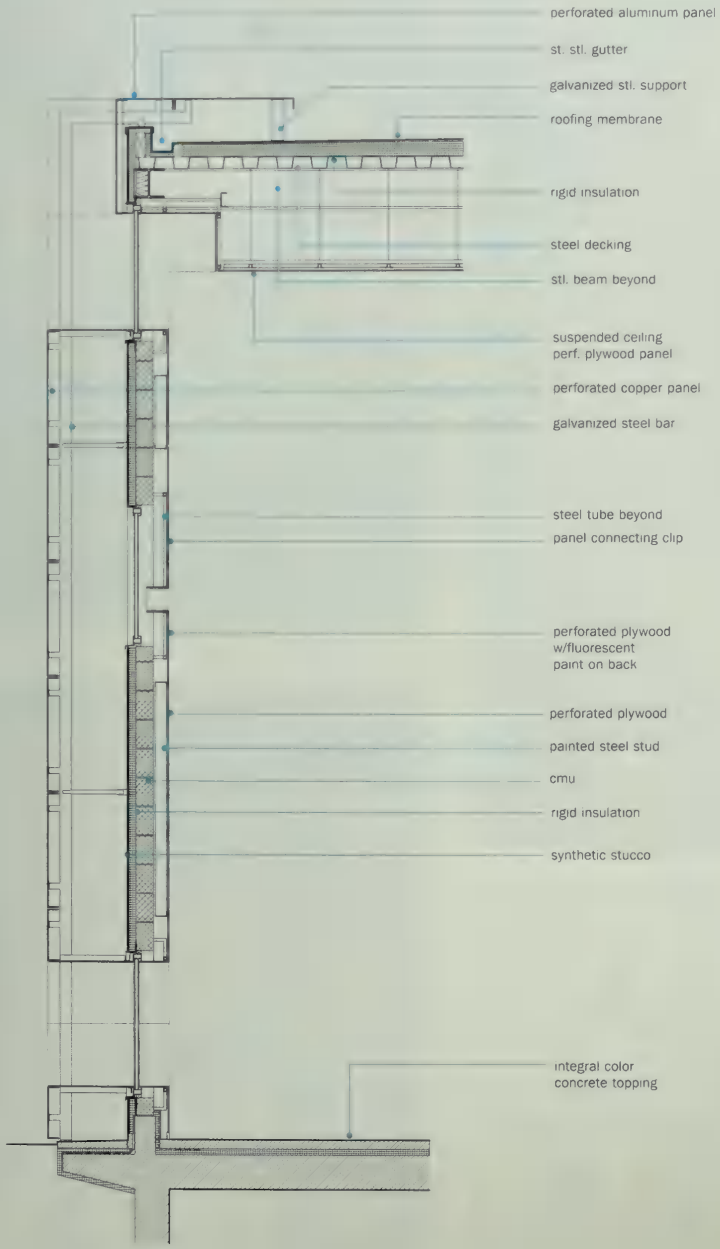




Most of the volume of the dining/conference pavilion is held away from the bulk of the existing warehouse. A passage on the upper level overlooks a rooftop pool (figures in photo are facing it), which casts rippling patterns on interior ceilings.



WINDOW HEAD



WALL SECTION



PAINTING WITH LIGHT

Critic Kyle Gann has described the composer Morton Feldman's overlapping and superimposed patterns, derived in part by chance, as "highly chromatic, rippling with dissonant intervals." Holl's team found a more three-dimensional inspiration in the Menger sponge, a mathematical construction that creates an infinity of surface as an infinity of volume is removed. Holl's office built models of Menger-like cubes and used throws of dice to determine the pattern of cutouts (above). The architects enriched the form by making it more ambiguous and using similar chance methods to introduce color. "We first studied two-layer glass, but the effect was too predictable," explains Korhammer.

Models and mock-ups, including a half-size one mounted on the site, were used to refine the wall section. Prepatinated, perforated copper panels (think tiny Menger-esque cutouts) filter light around the window edges and blur the onlooker's sense of the building edge. Moiré patterns appear and vanish as if the surface itself were in motion. Exterior fixtures mounted inside the panels make the entire structure glow at night. Inside, the painted, perforated plywood panels overlap some window openings, diffusing outside light into a soft, borderless glow. The interior plaster surfaces diffuse patches of fluorescent paint, applied to the back of the plywood, which add a mist of color, augmented in places by light fixtures. "We tried to create a language of color inside to outside and outside to inside," says Korhammer.

Some openings are sharply etched in the walls of the double-height dining and meeting pavilion (left), depending on the degree to which the inner surface overlaps the opening. A stair (bottom) accesses a mezzanine (center of photo, opposite), which leads to a small balcony overlooking the main lobby (below).





1. *Courtyard*
2. *Main entrance*
3. *Main lobby*
4. *Lobby/exhibition*
5. *Conference/dining*
6. *Public terrace*
7. *Outdoor seating*
8. *Offices*



GROUND FLOOR



cerebral idea could be made real, however, Holl and Het Oosten had to convince authorities on two city design-review panels that the pavilion would be a worthy replacement for the boiler plant and smokestack that dominated the waterfront elevation of the former warehouse. (The whole building had been designated a historic landmark. Holl did not think these elements could be successfully adapted.) He designed the new pavilion with a separate access, so that it, and its waterside plaza, could be open for public use after hours. Korhammer described the sensitive design and public intention of the addition as key to the "helpful and enthusiastic" reception the project received from city officials.

HOLL'S OPEN-ENDED ARCHITECTURAL STATEMENT REFLECTS THE CLIENT'S CHANGING PERSONALITY.

Holl constructed the pavilion by mounting a skin of prepatinated, perforated copper panels 30 inches outside the solid, stuccoed wall. Another scrim of perforated plywood panels was mounted a similar distance inboard of the interior plaster. Patches of colored, reflective paint were applied on the solid exterior surfaces and backpainted on the interior plywood. "We subjected the color to the same chance operations, and it began to develop its own nature," Korhammer explains, just as the Feldman pieces did. The variation in the green painted-on "patina" of the copper, along with the moiré patterns that appear and disappear according to the angle of the viewer, visually dissolve the surface and volume of the exterior.

Inside, with the aid of carefully placed electric fixtures, light delineates the architecture, as shadows move around the space and the penumbra of colors grows or weakens in intensity according to the seasons the weather, and the time of day. At times light bouncing from the canal and from a small lens of water maintained on an area of ground-floor roof add rippling reflections to the building's ceiling and walls.

The company says Holl's poetic use of light and his attention to detail and materials make the emotional connection for users. Versteijlen recognizes that Holl did not design a singular, complete statement, but an open-ended one.

As seemingly individualistic and willful as this project is, the use of both a mathematical and a musical system bespeaks an unease with artistic intuition. Holl is willing to give up some artistic prerogatives to see if another approach reveals a new language. The jury is out on that for now. Het Oosten, however, is undoubtedly "phenomenological," an ephemeral and ever-changing structure that mirrors our dynamic era. ■







The PSFS Building in Philadelphia was an instant landmark when it was completed by Howe & Lescaze in 1932 (above left). Its dark green granite base, along with the gray and black tower in brick and limestone, has just been restored, and the building converted to Loews Philadelphia Hotel (above right. The windows in the second-story banking hall (left) remain, and replacement windows in the tower and storefront match historic profiles.

PROJECT DIARY The landmark **PSFS** Building by **Bower Lewis Thrower Architects** and **Daroff Design** is reincarnated as a Loews hotel

By Suzanne Stephens

The thought of converting a historic icon of Modernist architecture from an office building into a convention hotel is alternately brilliant and unsettling. Especially this one. The austerely elegant Philadelphia Savings Fund Society building, designed by Howe & Lescaze 1929–32, was the first identifiable International Style high-rise in the world. The major public spaces, as well as the finishes and furnishings of the bank offices, were vivid testaments to the firm's functionalist aesthetic. Over the years the whole miraculously had stayed intact, although only its exterior was protected by landmark status. No wonder the architectural community was distraught when PSFS went bankrupt in 1992 and when the building and its contents were put up for auction in 1995.

In its present incarnation, the exterior has been preserved and restored by architects Bower Lewis Thrower, as were most of Howe & Lescaze's public interior spaces, including the monumental 30-foot-high second-floor banking hall, the 33rd-floor boardroom and dining room, the 12th Street lobby for the office tower, plus the elevator lobbies on each floor. As Arthur Jones, the principal in charge of the project, notes, "Everything had been so thought out and it all worked so well, it was intimidating."

Obviously certain changes had to be made to turn the banking tower into a hotel. The new ground-floor restaurant and cocktail lounge, which replaced a dress shop, plus the registration lobby, the guest bedrooms, and the north-south corridors leading to guest rooms, a spa, and ancillary ballrooms are not settings that Howe & Lescaze designed—or would have. And the interior designer, Karen Daroff, turned not so much to the astringent austerity of the International Style, but to its looser stepsister, Art Deco. Her inspiration came more from Hollywood movies than the Bauhaus, more from Cedric Gibbons than from Le Corbusier (whose paintings nevertheless influenced the design for the carpets).

Ironically, the splashiness of Art Deco was what Howe & Lescaze was trying to resist with its purer International Style architecture. But an office building and a hotel do have separate requirements. Loews Hotels felt that a minimalist International Style would have proved too dour. As Jonathan Tisch, president and CEO, explains, "With 583 rooms and a convention business, we can't be too out there. Loews is not a chain of boutique hotels for the young, hip crowd. We go after the 45-year-old-plus traveler who has certain expectations." If purists raise eyebrows at Daroff's theatrical injections of hotel conviviality, it can be argued that the conversion still leaves intact most of the essential features inside and out. Certainly, more people are seeing those original spaces than ever saw them before. As the story behind its current incarnation underscores, this is indeed a significant achievement.



1929–1932

In the 1920s the Philadelphia Savings Fund Society, founded in 1816, hired George Howe, of Mellor Meigs and Howe, to design its branches. He stuck to a modernized Renaissance or Beaux-Arts style for four of them but broke away for the fifth branch, at 12th Street and Market. Howe, age 43 in 1929, had already left his firm when he decided to team up with a European Modernist 10 years his junior, William Lescaze, for this job. PSFS's machinelike linear forms easily qualified it for inclusion in the landmark show of International Style architecture staged in 1932 by Henry-Russell Hitchcock and Philip Johnson at New York's Museum of Modern Art.

Located in the staid, traditionally Quaker city of Philadelphia at 12th and Market Streets, the 36-story, 491-foot-high, 557,000-square-foot tower easily loomed over everything around it, although it was still short of City Hall. Its design stood out, with its sleek granite base and limestone, brick, and glass offices jutting out from the elevator spine of the T-shaped plan. Yet it was only a branch office: most of the tower (floors 6



through 32) and, evidently, the fourth and fifth floors of the base, were leased out. Even the ground floor was turned over to a store. With the bank's own interiors, however, Howe & Lescaze was allowed to take over, designing every stick of furniture down to the wastebaskets, coat hooks, and Cartier clocks. It helped that the two architects had a receptive client in James Willcox, the PSFS president.

Howe and Lescaze didn't get everything they wanted: they conceived of a tower with continuous bands of fenestration on floor decks cantilevered from interior columns. But Willcox wanted to emphasize verticality and height, not horizontality. The compromise turned out to be limestone columns expressed on the east and west faces, with continuous fenestration on the north. There was some negative criticism at the time, based either on its severe look or on the fact that it was a skyscraper, not a low-rise building, Yet PSFS was, and is, the defining work of its age (and a partnership that ended in 1935). In the October 1949 issue of RECORD, Frederick Gutheim looked back over its 17-year history and concluded, "It still has an excitement to communicate. . . .Today what remains is not function but beauty."

1960–1993

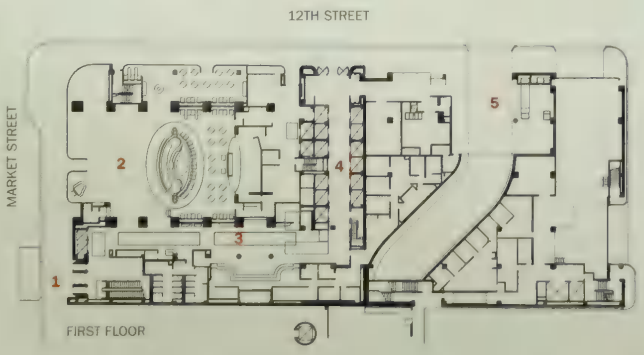
PSFS was given landmark status by the city, which meant that any change to the exterior would have to be approved by the Philadelphia Historical Commission. In 1969 the local AIA voted it the most important building in the city in the last hundred years. By 1976 it was put on the National Register of Historic Places, particularly significant if federal funding were needed for restoration.

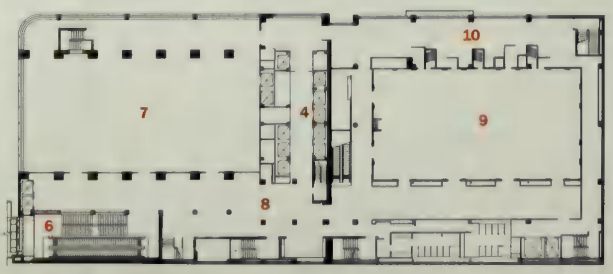
This section of Market Street, east of City Hall, has long been dominated by retail stores (and veering to down-market dumpiness, despite galleria-type infusions). In the 1980s an office-building boom on Market Street, to the west, stole its share of tenants who wanted 20,000-square-foot floors, not PSFS's 13,000, plus adaptability for computer wiring. After the savings-and-loan crisis of the 1980s, PSFS began a serious decline. In 1992 Meritor Savings Bank, the parent of PSFS, went under. It had already sold the PSFS name to a competitor, Mellon Bank, which created a brouhaha in 1991 by turning off the PSFS red neon sign at the top of the building. Architects and preservationists screamed, and the sign went back on. By the next year federal regulators had seized the

The restored 12th Street lobby (above), with its dramatic terrazzo floors, black and gray marble walls, and Cartier clock, now serves as the guest-room elevator lobby. The ceiling was lowered for a new elevator lobby on the second floor. Sapele pommele wood wraps the concierge desk (right).



1. *Entrance*
2. *Bar and restaurant*
3. *Guest registration*
4. *Guest-room elevator lobby*
5. *Access to garage*
6. *Entrance stair and escalator hall*
7. *Millennium ballroom*
8. *Prefunction space*
9. *New ballroom*
10. *Lobby for meetings*







The guest registration area, where walls are sheathed in black and red marble, now links the main Market Street entrance with the elevator lobby off 12th Street.

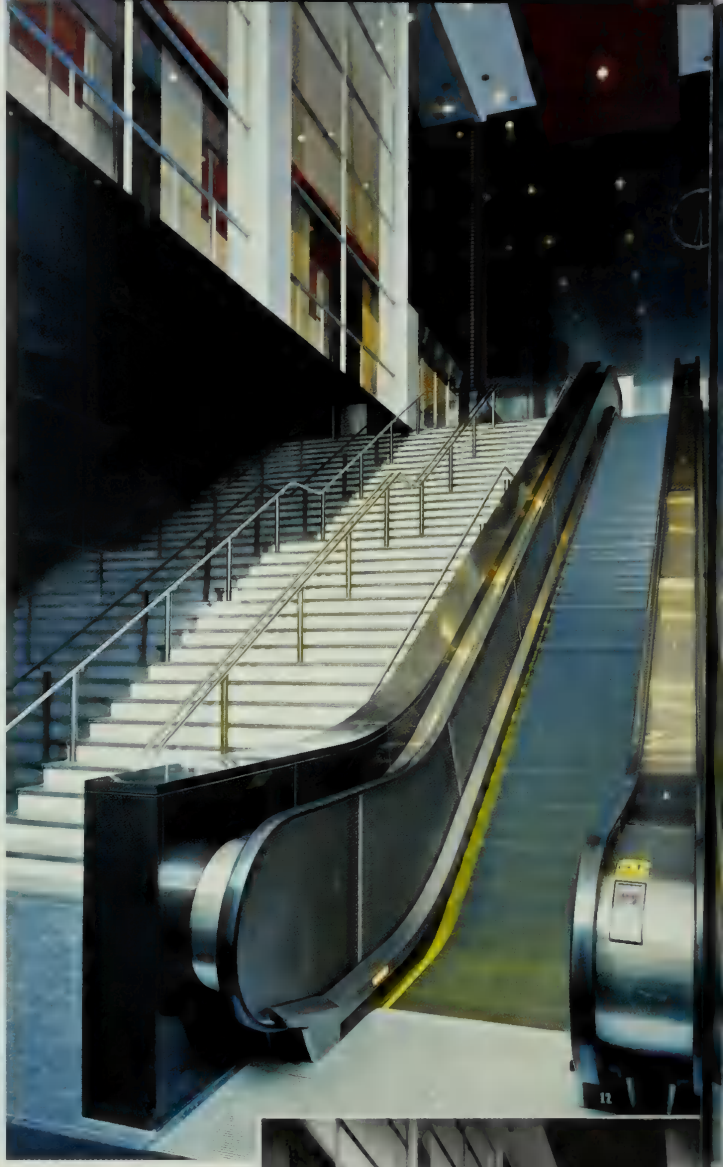
assets of PSFS, and the FDIC took over ownership interest, along with First National Bank Association of Milwaukee, a banking consortium that held a $52.4 million mortgage.

1994–95 The Pennsylvania Convention Center opened nearby on Arch Street between 10th and 12th Streets. The Postmodern corporate architecture was not breathtaking, but it was unusual in its integration into the Center City fabric. It triggered a surge in hotel construction. But with 5,800 hotel rooms, Center City still needed 3,200 rooms to attract a national political convention in 2000.

Meanwhile Bower Lewis Thrower, Philadelphia architects long involved in hotel, office, and multiuse projects, was designing the Marriott hotel next to the convention center. The firm felt PSFS also should be a hotel and talked to a developer specializing in conversions of old buildings for residential use, Carl Dranoff. He had the same idea. Dranoff allied himself with a larger-scale developer, the Rubin Organization (even joining it in early 1995). Meanwhile Ronald Rubin, its CEO, got in touch with Hyatt. A hotel conversion seemed ideal, even if the PSFS building could only generate 500–600 rooms, smaller than the 1,000 desirable for convention hotels. It had a great location near the convention center, and its T-shape plan was perfect for hotel rooms that needed light and views. But it lacked the usual 40,000 square feet of ballroom and meeting room space demanded of a 600-room hotel. The small lot in back on 12th Street, which had been owned by PSFS, now by the FDIC, would have to be acquired for this purpose.

1995 Financial problems worsened. The mortgage held by First National Bank Association NA and being paid by an assets manager, Realty Holdings of America, was in default. A sheriff sale, put off from the previous year (while Rubin and Hyatt negotiated with the bank), was rescheduled. The Rubin Organization and Hyatt offered $7 million for the purchase of PSFS from First National Bank, beating other teams (who reportedly offered the same amount). They were announced as developers for the estimated $90 million conversion, which would receive some public and private funding. The city's Philadelphia Industrial Development Corporation, a quasi-public economic development agency smoothed the deal. It borrowed money from the HUD 108 Loan Guaranty Program to lend to the developers. Furthermore, PIDC issued bonds under a local Tax Increment Financing Act in which the assessed real-estate taxes are used to repay the loan. It also agreed to buy the 18,875-square-foot parcel behind the building for $375,000 from the FDIC, then sell it to Rubin.

Meanwhile, there was the future of the Howe & Lescaze–designed furniture and objects to deal with. The building's contents were





Project: *Loews Philadelphia Hotel*
Architect: *Bower Lewis Thrower—Arthur Jones, AIA, Peter Miller, AIA, Malcolm Quinion, RIBA, project managers; Sheldon Bell, Stephen Freret, Dan Kayser, David Lewis, Allison Towers, AIA, Maurice Van Eijs, Karen Wohlert, team*
Interior designer: *Daroff Design, Inc.; Karen Daroff, principal-in-charge; Martin Komitzky, director of design; Alina Jakubski, project manager; Michael Resnic & Ulises Navarrete, project architects; Barry Corson, job captain; Phil Stinson, senior designer; Karen Pelzer and Suzanne Nelson, designers; Christine Neilon, specifications*
Engineers: *Cagley Harman Associates, MEP-PHY. (structural)*
Consultants: *Boles Smyth Associates (civil engineers); Powers & Company, (historic); Shen Milsom & Wilke, Inc. (acoustical); Peter Corsell Associates, Inc. (exterior wall); Liebowitz Gould Design, Inc. (graphics); Becker & Frondorf (project directors)*
General contractor: *L.F. Driscol*



Bower Lewis Thrower restored the main escalator/stair hall that opens off the main entrance on Market Street (left). Only downlights and an extra stainless-steel rail have been added to the almost-50-foot-high space sheathed in black Belgian marble walls, with Bianco Chiaro marble risers. Upstairs (right), the jaune-ombre-sienna marble mezzanine balconies have been restored, now separated from the ballroom by a glass curtain wall installed between the black-and-white marble-clad columns.

to be auctioned off as used office goods along with ordinary furniture from the leased spaces. The Philadelphia Museum of Art, with a grant from Preservation Pennsylvania, bid on Howe & Lescaze's designs and became the "caretaker" for 126 items, including the famous Board Room table and chairs. The museum's intent was to collect and preserve the furniture, with the hope it would be put back in the building. The museum did keep about 13 representative pieces deemed too fragile to hold up under continued hotel use.

1996–1997

A slight setback occurred when Hyatt removed itself from the picture owing to some partnership differences. Rubin ultimately got in touch with Laurence Tisch and Preston Robert Tisch in New York, cochairmen of Loews, a holding company. The two brothers had begun their careers developing hotels for their father in New Jersey in the late 1940s, but entered another league after they had Morris Lapidus design the souped-up modern Americana Bal Harbour hotel in Miami in 1956.

In April 1997 the deal between Loews Hotels and the city was announced. Overseeing the project would be Jonathan Tisch, son of Preston Robert Tisch and a co-president of Loews, as well as head of the hotel division. By now, the cost was estimated at $105.4 million, and it was agreed that Rubin would be a turnkey developer—that is, develop the hotel for a fee and turn it over to Loews. Although Bower Lewis Thrower had done the feasibility studies, it still had to be interviewed by Loews to get the job. As for Karen Daroff, Tisch already was keen on the dynamo founder of the 27-year-old firm, Daroff Design. While Daroff had first made her reputation doing very tailored corporate offices, her subsequent turn toward pizzazzy, themed entertainment environments catapulted her to the top echelon of a new market. This background, however, was not reassuring to Howe & Lescaze aficionados.

Loews' plans called for 23 guest rooms per floor, each about 400 square feet in size, plus three concierge floors, three ballrooms, and numerous meeting rooms. The PSFS was to be renamed Loews Philadelphia Hotel, but the PSFS sign would stay atop the building.

Because Philadelphia does not landmark interior spaces (as New York does), there would have been more concern had not Loews been interested in the federal tax credit program. This program, monitored by the National Park Service and open only to buildings that have been named a National Historic Landmark, meant the major interior spaces would be saved and restored. To be sure, it helped that the tax credit program was equal to 20 percent of the cost of rehabilitation (see page 63 for details). The downside to the legislation is that it only lasts five years: after that, Loews can make changes. Or if Loews sells the hotel, the new owner can make serious alterations.

Fortunately, Daroff and Tisch were sympathetic to repatriating the bank furniture. In 1997 the Philadelphia Museum returned the furniture to Loews with the written agreement that if and when the hotel no longer wished to house the pieces, the museum would be notified, so it could determine what was to be done with them.





The original 30-foot-high banking hall (left) on the second floor is now the Millennium Hall ballroom; some tellers' stations were recycled for the registration and bell captain's desks in the lobby. In the ballroom Daroff Design added custom glass and aluminum torcheres, a carpet, and draperies. A stainless-steel door from the original vault screens a new exit stair.

1998–2000

Meanwhile, a handful of other hotels were also getting PIDC financing. But not everyone was ecstatic. In November 1998 James Russell, editor-at-large for RECORD, criticized the PSFS conversion plan in the *Philadelphia Inquirer*, wondering "who would want to turn such a building into a hotel with fluffy pillows, plush furniture, oversize flower arrangements and crystal chandeliers?" By July 1999 the cost had inched up: Now the project was budgeted at $115 million, with $24 million in low-interest financing (including HUD's $20.7 million), $16 million from tax-increment financ-







The 33rd-floor boardroom (above left and right), with its restored Macassar ebony and rotary-cut walnut veneer walls, is used for special functions. The Howe & Lescaze furniture is in the ware-house. The oriental walnut-, rosewood-, and laurel-paneled dining room has been restored as well, along with the vestibule and hall (left), where Le Corbusier chairs are added, and the glazed solarium (below), where columns are clad in stainless steel.



ing, $30 million from Loews, and the rest from Bankers Trust and Westdeutsche Landesbank. Incidentally, Tisch informed the press that the rooms were plain, with "no fussy flower prints."

PSFS opened in time for the AIA convention in May 2000 and was the home of the Florida delegation of the Republican national convention in August. Word of mouth has been very good, and the occupancy rate has averaged a respectable 65 percent. Loews kept the main entrance to the hotel on the Market Street side, where the original one had been, with a new canopy designed by Bower Lewis Thrower. This was the only major change to the existing exterior, an improvement over another hotel's proposal to move the main entrance to 12th Street, with a interior car drop-off in the former store space. On 12th Street, guests may enter a garage under the BLT-designed four-story addition; this concrete-frame, glass-and-aluminum structure is not as refined in its exterior detailing as its neighbor, but it skillfully assimilates into its immediate context.

THE PRESENT

Naturally changes had to be made to turn the PSFS bank building into a hotel. The most obvious one concerns the banking hall on the second floor. It would have made a dynamite lobby. So why not put the lobby, bar, and restaurant on the second floor, especially because the front entrance opens directly onto an almost-50-foot-high monumental stair/escalator hall directly leading up to this dramatic space? Tisch felt a ballroom would work better in the banking hall since the hotel needed such spaces for its convention functions. And the ballroom also is a good source of revenue. Now guests enter into the restored escalator/stair hall, then make a sharp left to go to the lobby registration area on the ground floor. While this may be disorienting at first, they seem to get used to it quickly. Daroff's design for the registration lobby is the closest of her interiors to the feeling of Howe & Lescaze's architecture. The presence of original Belgian black, Bardiglio gray, and reddish Numidian Sanguine marbles, plus the addition of exotic wood paneling evocative of that in the boardroom, along with installation of old tellers' counters from the main banking hall for the registration desk and bell captain's desks, all do their part. The rug, based on paintings by Le Corbusier, and the four Lescaze chairs (two replicated) contribute to the aura.

To connect the new narrow hotel lobby to the restored 12th Street guest-room elevator lobby, the architects needed only to punch through a rear wall. The 12th Street lobby was originally two stories high (27 feet to the ceiling), with the elevator skipping to the third floor. However, to create a new elevator lobby for the ballroom on the second floor, Bower Lewis Thrower had to lower the ceiling of the first floor to 17 feet. The remaining guest-room elevator lobbies above in the cross bar of the T-plan have been kept in their original state. Even today they are almost shocking in their austerity and authentically sepulchral gloom, with black marble wainscoting (and the addition of a telltale contemporary peach color atop certain walls, which were originally light yellow). In the leg of the T-plan leading to the guest rooms Daroff introduced a vinyl peach wallcovering in place of the black marble (much of which had disappeared with tenant renovations). A jazzy zipper-patterned runner incorporating, according to Daroff, original colors in the building, covers the black terrazzo floor.

The second-floor banking hall, now the Millennium Ballroom, was not changed drastically, except for the insertion of a glass curtain wall to separate the ballroom from the mezzanine (now lobby and prefunction) area. The tellers' counters were removed, and in the corner the architects installed another exit stair (in the minimal style of Howe & Lescaze), which is now screened by the striking bronze-and-stainless-steel door taken from the former vault. The Daroff-designed brightly







The new Daroff-designed restaurant features a vivid glass mosaic mural, Sapele Pommele wood, and a elliptical glass ceiling event. The Presidential Suite (below) recalls 1930s Hollywood films.



The elevator lobbies for the guest rooms are located in the cross bar of the T-shaped tower (above and right). The Belgian black marble on the long walls, Bardiglio Costaccio marble on the end walls and the terrazzo flooring have been restored. The lighting fixtures are original, with new light sources installed. A peach tint on the upper walls was added by Daroff Design.

1. *Guest-room elevator lobby*
2. *Guest-room corridor*
3. *Guest room*



TYPICAL GUESTROOM FLOOR

patterned carpet and peach draperies obviously add another note, but not one that is dissonant with the overall look. As ballrooms go, the huge windows with views of the city by night (that is, if the curtains are not drawn) and the spaciousness and elegance of the materials make it an extremely sophisticated space for parties. Although the amber yellow marble balconies overlooking the banking space are now separated by a glass wall, they are still striking.

Where Daroff really could unleash herself was in the festive restaurant and bar on the ground floor and in the three fancy "concierge" floors just below the boardroom floor. The lounge and restaurant in the former Lerners space comes on strong: the feverishly colored mosaic mural looks more like Lapidus than Lescaze. Nevertheless, the location on the street injects more of a sense of activity than did the Lerners shop. On the concierge floors, large and lavish residential suites evocative of Mae West films make you think of having someone peel you a grape while you unpack. Elsewhere in the tower's base Daroff inserted meeting rooms (full floors three and four), plus a health spa on five, where a lap pool necessitated reworking part of the structure. As Robert Powers, the historical consultant, noted, the fourth and fifth floors, apparently designed to lease out as rental space, had been subjected to renovations over the years, so that nothing of consequence was left to preserve. (The bank offices had been primarily on the third floor.)

In the new four-story annex, Daroff's two floors of ballrooms and "breakout" spaces are also meant to provide 1930s Hollywood class. Though the ballrooms suffer from looking too fabricated in their Decoid wall and ceiling treatments, they do benefit by opening onto graciously expansive lobbies with floor-to-ceiling glass walls facing Twelfth Street.

Some elements did not survive. For example, a portion of the third-floor mezzanine (where the transfer trusses for the banking hall are located) was originally the location for the major vault, the coupon desks, and the safe-deposit boxes. This area was turned *(continued on page 265)*



Loews kept the hotel entrance on Market Street, down the block from City Hall (left). The only major exterior change is the stainless-steel canopy designed by Bower Lewis Thrower. The firm was also responsible for a new 77,000-square-foot, four-story annex on 12th Street (right), which provides an entrance to an underground garage.



Sources

Structural steel frame: *New Build*
Masonry: *Houston Clay Products*
Glass curtain wall: *National Glass*
Metal panel system: *Centria*
Built-up roofing: *GAF Roofing, Kemper*
Aluminum tower windows: *Traco*
Storefront windows: *National Glass*
Glass and glass entrance doors: *Berkowitz*
Metal doors: *Curries*
Wood doors: *Graham*
Acoustical ceilings and suspension grid: *Armstrong*
Cabinet work, custom woodwork and paneling manufacturer: *Parisi*
Wallcoverings: *Carnegie, J.M. Lynne, Rigo Contract, MDC Wallcoverings, Maharam, American Contract*
Plastic laminate: *Formica Corp., Nevamar Corp., Wilson Art*
Stone vanities and countertops: *Baumgardner*
Floor and wall tile: *Dal-Tile; Mohawk Tile & Marble (health club); Lincoln Tile (Guest bathroom floors); Mohawk Tile & Marble (Guest bathroom walls) Marte-Granitogres (public rest rooms' floors and walls).*
Resilient flooring: *Tarkett, Mannington*
Carpet: *Hughmacky (custom carpets); Carousel (Presidential Suites); Pacific Carpet Mills (area rugs).*
Restaurant banquettes: *New York Contract Seating*
Paints and stains: *MAB*
Lighting: *Cole, Unilight, American Glass Light, USA Illumination, Prescolight*
Paneling: *Kemlight (FRP)*
Special surfacing: *Stonhard*

WWW *Read the article about the original PSFS building as it appeared in the October 1949 issue of ARCHITECTURAL RECORD in the* **Projects** *section at:* **www.architecturalrecord.com**



The "true" mullions of the glass curtain wall in the annex are designed to echo those designed by Howe & Lescaze next door. They are also made of stainless steel, but with a larger profile.


NO, ROME WASN'T BUILT IN A DAY.
[WITH THIS MACHINE IT COULD TAKE TWO.]
DELL
intel inside
pentium III



Flat Panel Monitor Sold as an Upgrade.

Empires come and go. And, what once was possible in months, is now required in days, or even hours. Not to worry. Because here's a workstation that can leap killer deadlines faster than you can say "Centurion." The Dell™ Precision™ workstation's RDRAM technology and dual processor capability provides architects and engineers the bandwidth and refresh rate to perfect their designs quickly—even up to the last minute. And a full range of industry-leading graphics cards delivers impressive 2D and 3D performance that breathes digital life into your creations. Just think of what those early architectural visionaries might have accomplished if they had a workstation like this.

DELL™ WORKSTATIONS:

DELL™ PRECISION™ 220

- Intel® Pentium® III Processor at 733MHz (up to 1GHz)
- Dual Processor/RAID Capable
- 64MB RDRAM (up to 512MB)
- 10.2GB[5] 7200 RPM EIDE HD (Up to 73.4GB[5] 10,000 RPM SCSI)
- 17" (16.0" vis) M781p Monitor
- 32MB 4X AGP NVIDIA TNT2 M64 Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$1629 E•VALUE CODE 89311-491016

BUSINESS LEASE: $45/MO., 48 MOS.[1]

ASK ABOUT OUR AIA DISCOUNT

DELL™ PRECISION™ 420

- Intel® Pentium® III Processor at 733MHz (up to 1GHz)
- Dual Processor/RAID Capable
- 128MB RDRAM (up to 1GB)
- 10.2GB[5] 7200 RPM EIDE HD (Up to 73.4GB[5] 10,000 RPM SCSI)
- 17" (16.0" vis) M781p Monitor
- 32MB 4X AGP Matrox G400 Max Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$1999 E•VALUE CODE 89311-491019

BUSINESS LEASE: $55/MO., 48 MOS.[1]

ASK ABOUT OUR AIA DISCOUNT

DELL™ PRECISION™ 620

- Intel® Pentium® III Xeon™ Processor at 866MHz (up to 1GHz)
- Dual Processor/RAID Capable
- 128MB ECC RDRAM (up to 2GB)
- 9GB[5] 10K RPM Ultra3 SCSI HD (Up to 73.4GB[5] 10,000 RPM SCSI)
- 17" (16.0" vis) M781p Monitor
- 32MB 4X AGP Matrox G400 Max Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$3549 E•VALUE CODE 89311-491035

BUSINESS LEASE: $98/MO., 48 MOS.[1]

ASK ABOUT OUR AIA DISCOUNT

SYSTEM OPTIONS

Graphics Cards:
- 32MB 4X AGP NVIDIA TNT2 M64
- NEW 32MB 4X AGP NVIDIA GeForce2 GTS
- 64MB 4X AGP GLoria® II Pro (420 & 620 only)
- IEEE 1394 Adapter Card

Monitors:
- 17" (16.0" vis) P780 FD Trinitron® Monitor
- 19" (17.9" vis) P991 FD Trinitron® Monitor
- 21" (19.8" vis) P1110 FD Trinitron® Monitor
- 15" (15.0" vis) FP1501 Flat Panel Monitor

Operating Systems:
- MS® Windows® 2000 Professional
- Red Hat® Linux™ 7.0 (420 & 620 only)

DELL.COM

USE THE E-VALUE CODE TO GET EXACTLY WHAT YOU WANT | 800.873.3719 | WWW.DELL.COM

E•VALUE™

USE THE POWER OF THE E•VALUE CODE. Match our latest technology with our latest prices. Enter the E•VALUE code online or give it to your sales rep over the phone. www.dell.com/evalue

Dell recommends Windows 2000 Professional for business.

Call: M-F 7a-9p | Sat 10a-6p | Sun 12p-5p CT | Canada: 800-839-0148 | Mexico: 001-877-269-3379 GSA Contract #GS-35F-4076D

Prices, specifications, and availability may change without notice. Taxes and shipping charges extra, and vary. Cannot be combined with other offers or discounts. U.S. only. For a copy of our Guarantees or Limited Warranties, write Dell USA L.P., Attn: Warranties, One Dell Way, Round Rock, Texas 78682. [2]Service may be provided by third party. Technician will be dispatched if necessary, following phone-based troubleshooting. Availability varies. [5]For hard drives, GB means 1 billion bytes; accessible capacity varies with operating environment. [1]Business leasing arranged by Dell Financial Services L.P., an independent entity, to qualified customers. Lease payments based on a 48-month FMV purchase option lease and do not include taxes, fees and shipping charges. Subject to credit approval and availability. Lease terms and pricing subject to change without notice. Intel, the Intel Inside logo, and Pentium are registered trademarks and Intel SpeedStep, Pentium III Xeon, and Celeron are trademarks of Intel Corporation. MS, Microsoft, BackOffice, Windows NT, and Windows are registered trademarks of Microsoft Corporation. Trinitron is a registered trademark of Sony Corporation. ©2000 Dell Computer Corporation. All rights reserved.



You never know when you'll be ambushed by fire. But if you've got DuPont FE-36™ in your portable extinguishers, you'll be well prepared. FE-36™ is universally effective on every kind of fire. It leaves absoulutely no residue, which makes for less clean-up and greater uptime. Its low toxicity is good news for users and its lack of ozone-depleting properties is good for everyone. And FE-36™ is globally available. For more information, call 1-800-473-7790 or visit our website, www.dupont.com/fire.

DUPONT

DuPont Fire Extinguishants

CIRCLE 61 ON INQUIRY CARD

A New Chapter

CUED BY CHANGING EDUCATIONAL AND COMMUNITY NEEDS, FROM INTERNET ACCESS TO EXPANDED RECREATIONAL FACILITIES, ARCHITECTS ARE RESHAPING THE LIBRARY.



1.

Flushing, N.Y.

A new branch library by Polshek Partnership Architects serves a community with high-volume user traffic.



2.

Hanover, N.H.

Venturi, Scott Brown and Associates redesigns a hall at Dartmouth College to house a collection of rare books.



3.

Belfair, Wash.

A regional library by Carlson Architects features exposed wood trusses inspired by the nearby forest.



4.

San Jose, Calif.

The Biblioteca Latinoamericana, designed by Steven Ehrlich with executive architect Garcia Teague, acts as a multipurpose community center.

By Abigail A. Van Slyck

Not so long ago, the library was a building type that appeared on the brink of extinction. The computer revolution seemed to threaten the very existence of the printed book, in turn calling into question the place of the library in a technologically advanced society. With more American households rushing to join the online community (80 percent by 2003, according to some estimates), the day appeared close at hand when most information needs would be met by private vendors delivering services—and collecting fees—exclusively via the Internet. While this privatization of information has chilled the hearts of librarians, whose professional ethos was built upon the notion of public libraries as "arsenals of a democratic culture," architects specializing in library design also have watched nervously lest brick-and-mortar book repositories disappear entirely from view in the digital age.

A new chapter has begun, however. Architects in communities everywhere now find themselves in the midst of a library building boom. As last July's frenzied launch of the latest Harry Potter book signaled, the printed word—which one can hold in hand rather than handle via laptop—is alive and well. And while privatization of information resources remains a much debated cultural issue, public support for libraries is steadfast. Indeed, far from disappearing quietly from the scene, libraries are experiencing an expansion phase comparable to the proliferation fueled by the largess of philanthropist Andrew Carnegie in the early 20th century. Paralleling that historic cycle, the new upturn in library construction has generated impressive figures; according to *Library Journal*, 675 new U.S. libraries were completed between July 1992 and June 1999, while the same period saw another 863 remodeled, renovated, or expanded, to the tune of $4 billion. And F.W. Dodge, a division of the McGraw-Hill Companies, forecasts 2000 to tally 6.5 million square feet of library construction, at a value approaching $1.1 billion. As in the Carnegie era, this flurry of activity has spurred new ideas about the library as an institution. In short, the type is not simply enjoying a renaissance but undergoing a radical transformation.

Rethinking the computer's impact

The new library model has everything to do with the growth of the Internet, albeit in ways not fully appreciated a decade ago. Far from forcing civic facilities into obsolescence, the computer actually has increased library usage. This is due in large part to the role libraries have assumed in providing public access to the Internet free of charge. By 1998, 84 percent of suburban libraries and 64 percent of rural ones provided public Web access. Perhaps more surprising is the dawning realization that increased



Schwartz/Silver Architects designed a glass-box addition to Clark & Russell's circa 1899 Hyde Park Library in Boston (left) that respects the dominance of the original portico. A new Youth Wing at the Brooklyn Public Library (below) by Pasanella+Klein Stolzman+Berg placed a technology loft above the children's reading area.

electronic activity in the library stimulates use of print material. No longer perceived as a rival to the book, the computer has lost its stigma as library interloper and now is found in every part of the building. In the $2 million renovation of the Youth Services Wing of the Brooklyn Public Library, Pasanella + Klein Stolzman + Berg have treated books and computers as two sides of the same coin; a new freestanding "technology loft" is equipped with 41 new child-friendly computer stations while creating an intimate canopy over reading alcoves below.

Providing the infrastructure for this full integration of the computer is a primary challenge of contemporary library design. Where once the strategy might have been to hide such technical services, architects are opting to reveal high-tech library systems, whether in the "powerbellies" that hug the ceilings of the Central Phoenix Library (bruderDWL architects), or the raised floors at each level of the Vancouver Central Public Library (Moshe Safdie and Associates) that announce their presence through a glazed wall of the library's entrance atrium.

The Internet may also share some responsibility for intensifying awareness of how patrons interact with information media. Certainly, there is a renewed appreciation for the simple act of reading a book, as well as a sharp realization that modular libraries of the postwar era failed to enhance that act. In theory, midcentury modular planning enlivened libraries by uniting books and readers. In practice, however, large rectangular footprints, uniform eight-foot-high ceilings, and harsh fluorescent lighting rarely made these buildings exciting or even pleasant places to be.

Appreciating prewar models

The recent reaction to the modular model has been strong indeed, prompting a new respect for prewar library buildings that extends well beyond their historic facades. No longer does it seem prudent to gut an older building in the name of technological progress. The recent refurbishment of the Boston Public Library by Shepley Bulfinch Richardson and Abbott, for example, has restored the building's extended entry sequence, taking readers on a climb to enlightenment as they move from low to lofty spaces, from dark to light, from the limited palette of ground-floor mosaics to the vibrant colors of allegorical murals above. And the decision of the New York Public Library to devote $15 million to the restoration of the Rose Reading Room confirms that trustees no longer consider cold circulation statistics the best gauge of a library's success.

Library additions now show more respect for the functional logic of an original building, although the specific means of relating old and new vary. Clad in cubic blocks of Georgia marble, an addition to Savannah's Bull Street Library by Hardy Holzman Pfeiffer Associates seeks compatibility with the 1916 Carnegie-financed building. In contrast, Schwartz/Silver Architects' addition to Boston's 1899 Hyde Park Library is a glass box scaled to maintain the dominance of the original entrance portico. In both projects, the architects took great care to retain the original entrances while making them fully accessible to the physically challenged.

Architects have also sidestepped the monotony of modular libraries by using windows, skylights, clerestories, glass curtain walls, and top-lit atria to bring natural lighting back into reading areas. Spaces now are designed especially for different modes of reading, from cozy corners with comfortable chairs to monumental reading rooms that elevate the act of reading by situating readers at long rows of tables within a community of intellectual engagement.

Architecturally savvy observers might also recognize the ancient precedents of such grand reading rooms, stretching back through Bates Hall at the Boston Public Library, Henri Labrouste's Bibliothèque Ste.-Geneviève, Michelangelo's Laurentian Library, and medieval monastic libraries. The most compelling of these new monumental reading spaces, however, rely less on historical quotation than the reinterpretation of the type in light of other architectural and technological developments. At the great fifth-floor





reading room of the Phoenix Central Library, for instance, 30-foot concrete columns support a tensile roof structure, while the location of the room on the top floor allows the monumental space to coexist with standard-height spaces on floors below.

The return of the monumental reading space is part of the growing acknowledgment that the library is as much about social interaction and intellectual exchange as the storage of books and the delivery of discrete packages of information into the hands of an individual reader. In fact, this is not a new idea; the stereotype of the library as a storage house for books ignores the longer history of the building type. In the early 19th century, subscription libraries were often called athenaea to evoke the range of cultural activities—lectures, art exhibitions, scientific demonstrations—that took place there. Although Victorian-era libraries abandoned the lofty term in an attempt to reach a wider audience, they nevertheless continued many of the athenaeum's cultural activities and often expanded them in new directions. (H. H. Richardson's Winn Memorial Library is a well-known example; its hexagonal museum room once housed natural-history specimens, while paintings graced the walls of the gallery next door.) Reinterpreting the multipurpose form for today requires a delicate balance between book and nonbook functions. For instance, adjoining San Jose's Biblioteca Latinoamericana (page 166), a youth center is 2,000 square feet larger than the library itself, while a courtyard between the two structures serves as a focus of community life.

This trend to enliven urban neighborhoods with libraries also is rooted in the past, in the City Beautiful movement of the early 20th century. But where City Beautiful civic centers sought to isolate cultural institutions from commercial downtowns, many recent projects break down the distinction between commerce and culture, entertainment and enlightenment. Moshe Safdie's designs for libraries in Vancouver and Salt Lake City make this change particularly clear; in each project a commercial arcade is part of the library building itself and shares its glass entrance atrium. The proximity attracts shoppers to the library but also heightens the contrast between the lively spaces of the shop and quiet spaces of the library.

Making the library legible

The library's expanding range of functions and its place within the community raise issues of architectural legibility. How will this transformed building type announce its presence within the urban landscape? Many of the conventional means of signifying "library" seem out of step with contemporary culture. The palazzo form used by Labrouste and others derived its impact in part from the novelty of providing public access to cultural amenities once available only to the rich. The more modest domed and temple-fronted libraries of the Carnegie era conveyed their metaphors of enlightenment in a classical language that no longer seems universally comprehensible.

A number of recent projects, including the Queens Borough Public Library by Polshek Partnership Architects (page 154), have adopted transparency as a means of allowing passersby to see for themselves what a library has to offer. And at the Biblioteca Latinoamericana, a large glass-and-stainless-steel showcase juts out onto the sidewalk, an element the architects characterize as a "jewel box."

This showcase in San Jose—which critic Alan Hess likens to the display window at a car dealership—suggests that neighborhood libraries are increasingly speaking a new language altogether. Forms and materials may evoke agricultural warehouses, industrial processing plants, or buildings from the commercial strip, but such references to the postwar vernacular no longer smack of sacrilege, nor are they offered as ironic commentary on the sad state of public literacy. Instead, firms are employing local vernaculars to communicate metaphorically. Rooms flooded with natural light accent the library's role as a center for enlightenment, while the contrast of monumental spaces and mundane materials highlights its alchemic qualities: not only do patrons assemble small bytes of information into bigger ideas, but they themselves are transformed and their horizons expanded. A virtual world is already accessible via computers nestled in our palms, but brick-and-mortar libraries will continue to thrive, allowing us to experience our real connections and responsibilities to a larger community. ■

Abigail A. Van Slyck is the Dayton Associate Professor of Architectural History and Director of the Architectural Studies Program at Connecticut College. She is the author of Free to All: Carnegie Libraries and American Culture, 1890–1920 *(Chicago, 1995).*



Frye Gillan Molinaro Architects created a cathedral-like reading room (above) at the Sun Prairie (Wis.) Public Library. In Kennewick, Wash., a library by Buffalo Design (right) anchors a new 21-acre park. Concrete walls, metal roofs, and exposed structural-steel members evoke local agri-warehouses.

Queens Borough Library
Flushing, N.Y.

1

POLSHEK PARTNERSHIP BUILDS AN EFFICIENT LIBRARY FOR THE FUTURE AT A SITE THAT HAS BEEN HOME TO A HIGH-TRAFFIC BRANCH SINCE 1891.

By William Weathersby, Jr.

Architect: *Polshek Partnership Architects—James Stewart Polshek, FAIA, Todd Schliemann, AIA, principals; Joseph Fleischer, FAIA, partner-in-charge; Joanne Sliker, AIA, Steven Peppas, Paul Golden, Jihyon Kim, James Slade, Kyle Yang, Charles Brainerd, Lisa Odyniec, project team*
Interior design: *Polshek Partnership Architects, Hertzfeld Design*
Client: *City of New York Department of Design and Construction*
Consultants: *Professional Library Consultants (planning); the Cantor Seinuk Group (structural/civil engineer); Jaros Baum & Bolles (mechanical, electrical, and plumbing engineer); A. Billie Cohen, Leonard Strandberg & Associates (landscape); Hayden McKay Lighting Design; Shen Milsom & Wilke (acoustical); Tishman Construction Corp. (construction manager)*

Size: *76,000 gross square feet*
Cost: *$21 million (construction)*
Completion date: *June 1998*

Sources
Masonry: *New England Stone Industries*
Curtain wall: *Sota Glazing, JJ Priest*
Windows: *Sota Glazing*
Glazing: *Prelco, Copper Sales*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at* **www.architecturalrecord.com**

Program

Beginning in 1891 with a one-room wood structure, a library has anchored a busy crossroads in Flushing, N.Y., a densely populated community of greater New York City. In 1902, philanthropist Andrew Carnegie endowed the construction of a larger building. Recently a handsome library designed by Polshek Partnership Architects replaced an outmoded facility built in 1957. Offering Internet access, language laboratories, meeting spaces, a fully outfitted auditorium, and a collection of more than 1.5 million items, the ambitious 76,000-square-foot, four-floor facility is poised to steer the Queens Borough Public Library into the new century.

The branch is the largest in the borough's 63-location network, which has the largest circulation of any public library system in the U.S. Queens residents collectively speak more than 100 languages, and the library circulates material in more than 40 of them, from Arabic to Zulu. "Our library is often one of the primary public venues local immigrants turn to as a resource when assimilating into American culture and as a means of staying connected with their homelands," says branch library manager Ruth Herzberg. "We wanted the library to be accessible to this diverse group in terms of its architectural form and operational layout."

RECORD contributing editor William Weathersby, Jr., writes about architecture from Westport, Conn.

Solutions/Intentions

"The building's importance within the community was emphasized by making its collections and functional organization visually accessible from the street," says Polshek principal architect Todd Schliemann, AIA. The curving curtain-wall facade allows passersby to view activity within and invites them inside. The building also bridges the quirks of its triangular site, which is formed by the intersection of Main Street and Kissena Boulevard, and drops in grade 7.5 feet across its width. The asymmetry of the crossroads is emphasized by the contrast between the glass facade fronting the commercial artery of Main and the somber stone facade greeting the more residential boulevard. The relative opacity of the stone cladding along the side street affords privacy for both neighborhood residents and library office staff, while accommodating bookstack placement along the northern and eastern perimeters of the building. To create a welcoming front porch of sorts, the entry was pulled forward at the apex of the triangle, where a landscaped plaza is bordered by shallow stone steps.

The curtain wall features a 50 percent horizontal fritting, while an interior shading system adjusts light levels within. "From the street, the







The transparency of a glass curtain wall along the Main Street facade engages the attention of passersby. The adjacent facade (above) fronts a side street with stone cladding.





The second-floor service desk (above) is a pivot point between stacks, reading areas, and PC workstations.

Stairs and reading areas are lit by daylight (above right and opposite). An auditorium (below) seats 150.



SECOND FLOOR

1. *Lobby*
2. *Information/service*
3. *Circulation desk*
4. *Current materials*
5. *Children's area*
6. *Reference collection*
7. *Quiet room*
8. *Compact shelving*



FIRST FLOOR

N ← 0 50 FT. 15 M.

arrangement of the reading and adjacent stack areas can be understood at a glance," Schliemann says. The centralized, open-plan layout is repeated on each of the three main floors, which are connected by a stair and elevator core just inside the exterior glass wall.

A floor below grade houses the 227-seat auditorium, exhibition areas, adult-learning center with language labs, and multipurpose conference room seating 150. Enhanced by a flexible area for presenting art and community-related exhibitions, the international resource center on the top floor provides information and referrals to patrons who wish to learn more about the people, cultures, and languages of the world.

Commentary

Cued by contemporary American culture, the library displays details that could be footnotes in a handbook for the millennium. Multiple copies of popular new books are displayed in quick-access bins that evoke the look of a commercial bookstore, while slick signage denotes literary genres and likewise embodies an aura of marketing savvy. Floor slabs incorporate two-foot-wide wiring-access trenchways for future upgrades, while "Teen Net Mentors" assist students surfing 15 computer terminals in the children's area. With most seats at carrels and tables often filled throughout the day, however, reading areas isolated along the glass curtain wall on three floors have a somewhat hemmed-in feeling; librarians have already noted the popularity of the single enclosed quiet room, a rare alternative space for contemplative study. Still, residents have embraced every sleek sector of the library, underscoring its success in tailoring design to the changing community. ■





Rauner Special Collections
Dartmouth College, Hanover, N.H.

2

VENTURI, SCOTT BROWN AND ASSOCIATES INSERTS A MODERNIST CUBE TO HOUSE RARE BOOKS WHEN ADAPTING AN AUDITORIUM AS A LIBRARY.

By Suzanne Stephens

Architect: *Venturi, Scott Brown and Associates—Robert Venturi FAIA, principal-in-charge; project architect; Daniel McCoubrey, AIA, senior associate-in-charge; James Kolker, AIA, project manager and associate-in-charge; Jeff Hirsch, project architect; Denise Scott Brown, Hidenao Abe, Nathalie Peeters, Tom Purdy, Matthew Seltzer, Nancy Rogo Trainer, AIA, project team*
Client: *Dartmouth College*
Consultants: *Keast & Hood (structural engineer); Bard, Rao + Athanas (HVAC, electrical, plumbing, and fire protection); T and M Associates (civil engineers); Towers/Golde (landscape); Donald F. Nardy and Associates (lighting); Lawrence G. Copley, (acoustical); Glicksman Associates (security); Jackson Construction (general contractor)*

Size: *37,000 gross square feet*
Cost: *$7.5 million*
Completion date: *April 1999*

Sources
Standing seam copper roofing: *Rodd Roofing*
Aluminum interior curtain wall: *Kawneer*
Cabinetwork, custom woodwork: *Polybois*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at* **www.architecturalrecord.com**

Program

Where once the name of Venturi, Scott Brown mainly brought to mind iconoclastic architecture and theories, the firm's sophisticated master planning for a number of campuses (Penn, University of Michigan, Dartmouth) gradually has been adding another dimension to its image. At Dartmouth, the Philadelphia-based architects are reconfiguring the campus to link the northern medical complex with the liberal arts buildings organized around the campus green. Central to the plan is the creation of a library cluster on the green's north side. Here the firm recently converted Webster Hall, an auditorium, to house the Rauner Special Collections Library. Next door, Baker Library soon will be renovated, and the firm has just finished Berry Hall, an addition on Baker's north side.

In the foreground of this ensemble, Webster Hall is a commanding, classical brick structure designed in 1901–07 by Dartmouth alumnus Charles Alonzo Rich. The architect did well by his alma mater: his New York firm, Lamb and Rich, built most of the facilities at Dartmouth, including Baker Hall in 1927. For its new life Webster Hall needed to house 30,000 linear feet of books and manuscripts, plus reading areas and staff offices. Dartmouth wanted to retain the architectural sense of the original, even in the interior, where a stage,





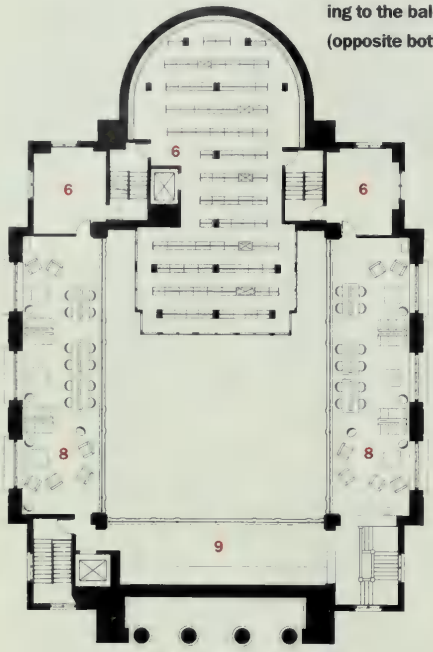
SECTION A-A

Webster Hall, an auditorium named for Daniel Webster and designed in 1907 by Charles Alonzo Rich, now occupies the foreground of a library complex.

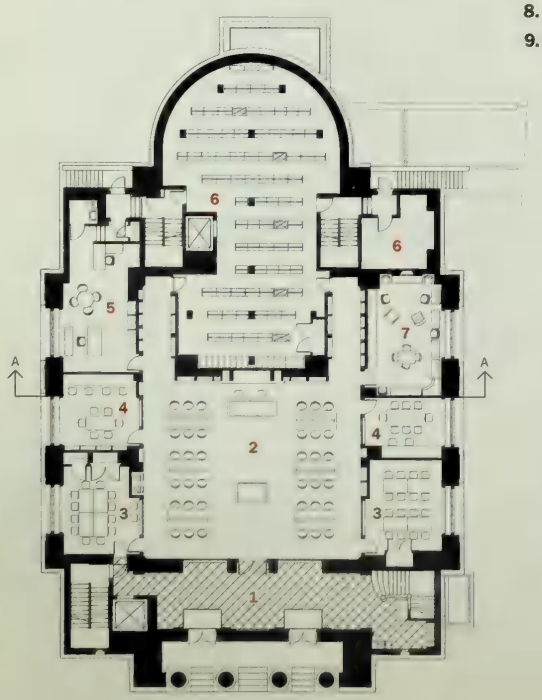


In the former stage and auditorium space Venturi, Scott Brown inserted a glass cage for books (right and opposite top). A new fire stair and elevator occupy the southwest corner across from the open stair leading to the balconies (opposite bottom).





BALCONY LEVEL



FIRST FLOOR

N 0 20 FT. 6 M.

1. *Lobby*
2. *Reading room*
3. *Seminar room*
4. *Study room*
5. *Office*
6. *Stacks/collections*
7. *Historic room*
8. *Reading/study*
9. *Portrait gallery*

defined by a large semicircular apse, overlooked an auditorium edged with balconies.

Solutions/Intentions

Inspired by the glazed stacks of Beinecke Library at Yale, the architects placed the books in a glass cage projecting from the semicircular apse into the former auditorium, now the reading room. The stacks are treated like a building within a building, replete with new and separate HVAC for humidity and temperature control. The east and west balconies, which originally had sloped floors for raked seating, were flattened with the lowest (front) section of the balconies becoming the floor plane for the new reading mezzanines. Seminar rooms were inserted underneath the balconies, along with the George Ticknor Room, the re-created study of the historian and alumnus of Dartmouth (1807). Most of the support staff is housed in a partially submerged level and has access to additional book storage under the lawn, behind the apse.

Aluminum and glass walls enclose the stacks, whose concrete columns and floors allow an efficient floor-to-ceiling height of about eight feet. Because the balconies originally braced the exterior wall, the new mezzanine required additional steel cross beams. New insulated glass units were installed in the oversize exterior windows.

While the stacks are lighted with baffled fluorescents, running halogen fixtures in the reading room are teamed with fiber-optic lights, which replaced incandescents in the coffered ceiling.

Commentary

The spatial drama of walking through the main entrance and beholding the soaring glass stack of books is splendid. Combined with the presence of existing wood detailing, this effect does much to make up for the fact that the original coffered ceiling of the apse is hidden by the stacks. The play of natural light, warm wood, cork floor, and upholstered chairs and sofas nicely counterbalances the neutral color palette and the still coolish tones of the fluorescent and halogen lighting (although fiber-optic lights also help).

The only severe problem is the acoustical-tiled ceiling and fluorescent baffles in the George Ticknor Room. Incandescent lamps should be mandatory for historic rooms with period furniture, in spite of facilities managers' penchant for easier solutions. ■







Timberland Library
Belfair, Wash.

3

CARLSON ARCHITECTS CREATES A NEW CIVIC PRESENCE AND REFLECTS A TIMBER TOWN'S PAST AT A LIBRARY BESIDE A NATIONAL FOREST.

By Sheri Olson, AIA

Architect: *Carlson Architects—Donald Carlson, FAIA, principal-in-charge; Mark Withrow, AIA, project architect*
Client: *North Mason Timberland Library*
Consultants: *Barbara Leland Interior Design; Nelson Architecture (library planner); Sider & Byers Associates (mechanical engineer); Hargis Engineers (electrical engineer); Swensen Say Faget (structural engineer); Bush, Roed & Hitchings (civil engineer); Hough Beck & Baird (landscape architect); Merit Construction (general contractor)*

Size: *14,400 square feet*
Cost: *$2.1 million (construction)*
Completion date: *February 1998*

Sources
Windows, exterior doors: *Hope's Architectural Products*
Masonry: *Mutual Materials*
Roofing, sheet metal: *BHP Steel Building Products*
Wood framing, millwork: *Gray Lumber*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at* **www.architecturalrecord.com**

Program

Across a two-lane highway from an auto parts store, and with the Olympic National Forest as its backyard, North Mason Timberland Library embodies the dilemma faced by Belfair, Wash., and other waning timber towns. An expanding strip of fast-food joints and gas stations has replaced sawmills that once were fixtures on the landscape. "We're surrounded by plain vanilla buildings; we wanted a library that fits our community's spirit," says librarian Victoria Rexford.

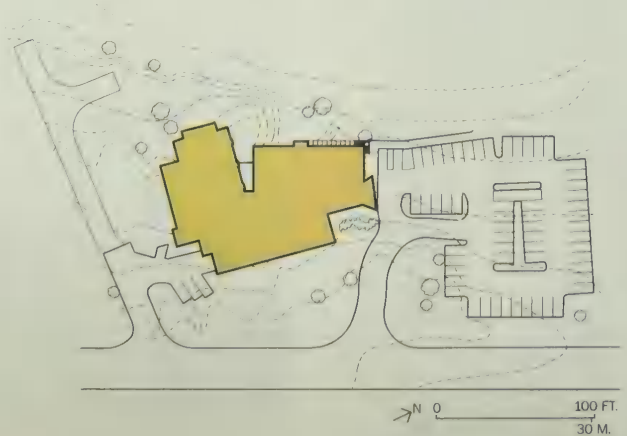
The new 14,400-square-foot facility, by Carlson Architects, replaces an outmoded 3,600-square-foot library on the edge of a wetland forest. As befits a region noted for growing ecological awareness, a dilapidated house was leveled to clear space for parking, minimizing the cutting of trees. The old library building was sliced into three pieces and barged down Hood Canal to become Hoodsport's new library.

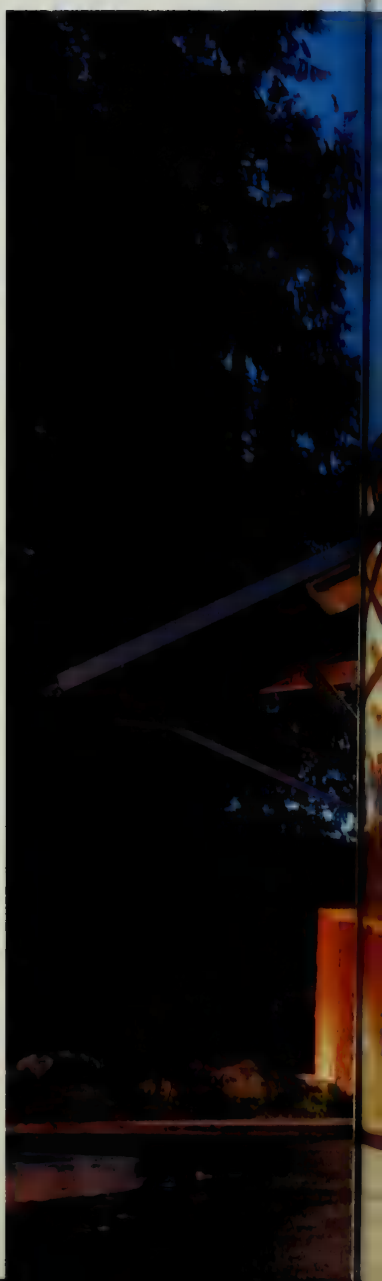
Timberland serves a population of 400,000 spread over five counties, so its role as a center for the community was a key design consideration.

Solutions/intentions

To distinguish the library from its boxy neighbors and ease it between trees, Carlson Architects borrowed the shed roofs and clustered forms of timber mills. With varied finishes on the standing-seam roofs—either dark green or galvanized metal—the library alternately recedes among the leaves or glimmers in the sunlight for visibility from the road. Two intersecting gables define the main

Seattle-based contributing editor Sheri Olson is the author of the forthcoming monograph Miller/Hull Partnership.









By borrowing the clustered roof forms of the region's timber mills, the library alternately blends in with the forest or signals its civic role on a busy commercial strip, depending on the vantage point.



interior volumes, a central lobby and the reading room. A children's library and staff offices are situated under shed roofs to either side. The gable over the lobby extends outside into a deep front porch framed by a pair of treelike columns. Inside, a glazed vestibule allows after-hours access to a community meeting room, while staff can survey the entire library from the lobby's circulation desk.

"It's a dilemma," says Donald Carlson, FAIA. "Librarians require open spaces for visibility and security, but there also need to be intimate places to sit and read."

The main reading room and the children's library have oversized bay windows that float reading nooks among the trees. In contrast to the lobby's lacework of trusses and plywood decking, this area features simple roof trusses and spare white walls. Large punched windows tuck up under the eaves, and metal brackets raise an eyebrow on the roof to let in sky. Aisles aside the double-height space and "rose" windows centered on the gable ends have an ecclesiastical resonance.



Commentary

By tweaking the vernacular, Timberland sidesteps the clichés that can plague Pacific Northwest architecture. In place of a heavy-timber structure, the lobby's reversed scissors trusses dynamically shape the space and capture the mutability of wood framing. Four-foot lapped sections of exterior metal siding recall the hand-split royal cedar shingles once plentiful here. Some ambivalence about the rustic aesthetic creeps into the detailing, however: where the plywood ceiling stops short of the wall to expose the ends of roof rafters, plywood edges are trimmed in wood and boxed back to the underside of the roof decking. Revealing the thinness of the material instead would have emphasized its planar qualities.

Lighting unifies the library: industrial shades are paired with custom mounts for uplights throughout. Metal halide sources bounced off whitewashed plywood panels subtly alter the color of light. ■



The lobby's splayed walls push its ridge line uphill to intersect with the reading room's gable roof (this page and opposite). A skylight filters sunlight through multiple layers of framing members.



TIMBERLAND LIBRARY





Biblioteca Latinoamericana
San Jose, Calif.

4 **STEVEN EHRLICH AND GARCIA TEAGUE DESIGN A LIBRARY AND GYMNASIUM COMPLEX THAT SERVES AS A NEIGHBORHOOD'S CENTRAL PUBLIC VENUE.**

By Lisa Findley

Design Architect: *Steven Ehrlich Architects—Nick Seierup, AIA, principal-in-charge; Steven Ehrlich, FAIA; Thomas Zahlten, AIA, project architect; Brent Eckerman, Scott Hunter, Cecily Young, Mohamed Sharif, Yuki Murata, John Gerard, Susanne Proesl, Jonathan Riddle, Todd Flournoy, Juergen Zimmerman, Tina Hollenbacher, project team*
Executive Architect: *Garcia Teague Architecture+Interiors—Gilbert Garcia, AIA, Wendy Teague, principals; Eddie Ketner, project manager; Denise Chew, Dan Patterson, Karen Jamieson, Alexander Moraviov, Jeremy Steinmeier, project team*
Consultants: *Biggs Cardosa Associates (structural engineer); Alpha Tech Consulting Engineers (MEP engineer); Kier & Wright (civil engineer); Patricia O'Brien Landscape Architecture*

Size: *15,148 gross square feet (library); 16,870 gross square feet (youth center)*
Cost: *$7.9 million (construction)*
Completion date: *November 1999*

Sources
Masonry: *Calstone, Orco Block, Interstate Brick*
Curtain wall: *Progress Glass*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at* **www.architecturalrecord.com**

Program

A new community-oriented complex is a beacon within a working-class Latino neighborhood struggling to stay alive amid dot-com prosperity in San Jose, Calif. Situated on a four-lane strip south of downtown, the Biblioteca Latinoamericana holds the sidewalk edge alongside used-car lots, taquerias, and long-time local businesses. Along with its companion building, the Washington United Youth Center, the library brings focus to neighborhood public life. Designed by Steven Ehrlich Architects and executed by Garcia Teague Architecture+Interiors, the $15.8 complex was funded by the city as part of redevelopment efforts stretching over two decades.

Now the largest branch in the city's public library system, the 15,000-square-foot Biblioteca was founded 26 years ago as a grass-roots effort to preserve and promote Spanish-language literacy and literature. Once comprising a few books stored in a church basement, the library now can store 60,000 books, videos, and periodicals. The adjacent 17,000-square-foot Youth Center hosts activities including sporting events, classes for teenage mothers, and a recent election speech by Al Gore. Linking the two buildings is a courtyard

Contributing editor Lisa Findley lives in Oakland, Calif., and teaches at the California College of Arts and Crafts.







Lighting animates the facade at night. A steel pergola shades the path from the street to the courtyard (opposite below), while a tower marks the entry to the Youth Center (opposite above).

called La Placita, designed as "a neighborhood gathering place for casual, everyday use as well as special occasions such as fiestas and cultural events," says architect Steven Ehrlich.

Solutions/Intentions

The site commands half a city block, extending from busy South First Street to a quieter, residential street behind. A 27-foot-high multicolored masonry wall serves as both formal library facade and symbolic face of the entire complex. The massive wall is only 12 feet thick, however. Like a western storefront, it is a civic-scaled, unifying gesture that masks varied building forms beyond.

The masonry wall is interrupted by a glass-and-steel storefront section that pushes out onto the sidewalk. Here passersby can view teens glued to computer screens or seniors browsing Spanish magazines in the technology area and periodical reading room. Patrons within feel part of the city as buses rumble past along the busy street.

The heart of the library is a voluminous, 5,200-square-foot concrete-block room housing children's reading, information, and circulation areas. Spanned by curving laminated wood beams, it is a smaller cousin to the gymnasium of the Youth Center. Lower-height satellite rooms accommodate adult and teen reading areas, offices, and auxiliary facilities. Similarly, wings in the Youth Center house classrooms, a game room, and offices.

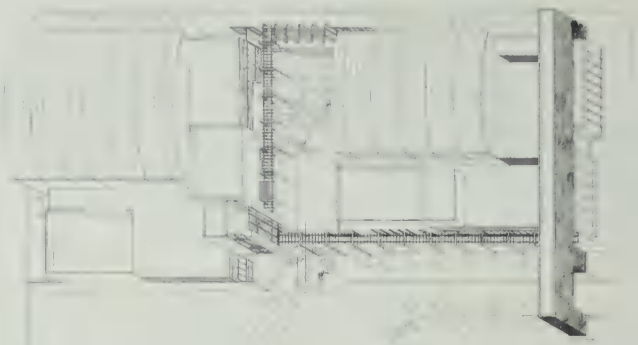
1. *Library*
2. *Youth Center*
3. *Courtyard*

In operation even when the library is closed, a 1,300-square-foot community room is situated in a back corner of the library, where gatherings can spill out into La Placita via a large glass roll-up door.

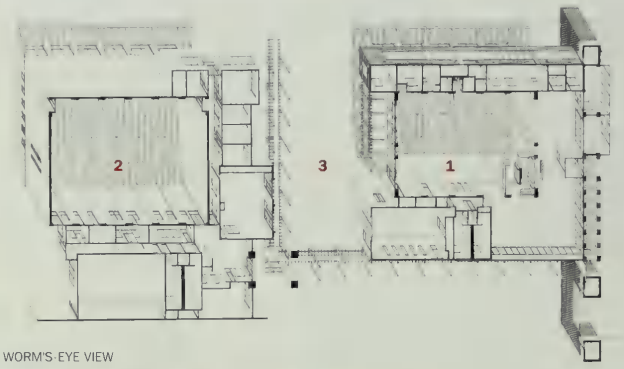
Commentary

The clustered massing of the buildings confronts the complex's dual identity as a formal institution and informal gathering place. Set alongside taller spaces, the smaller volumes admirably address the scale of tidy stucco residences in the area. The bright yellow metal siding that sheathes these sections, however, recalls the cladding of commercial buildings and trailers. It strikes a tinny note in an otherwise gracious and thoughtfully designed project.

Completed at $284 per square foot, Biblioteca Latinoamericana delivers a lot for the money. Joined by the Youth Center, it expands and elevates the notion of learning, offering varied programs that aim to enrich the lives of its patrons. ■



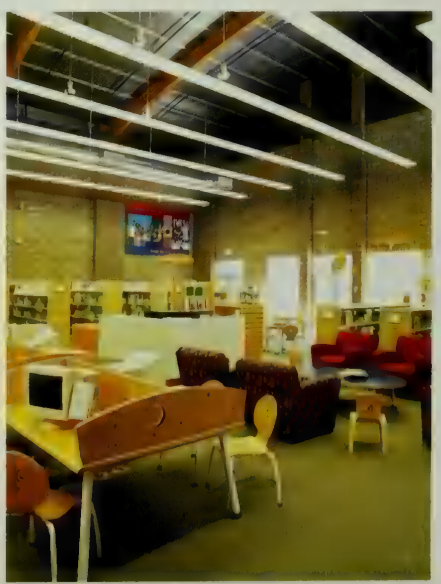
BIRD'S-EYE VIEW



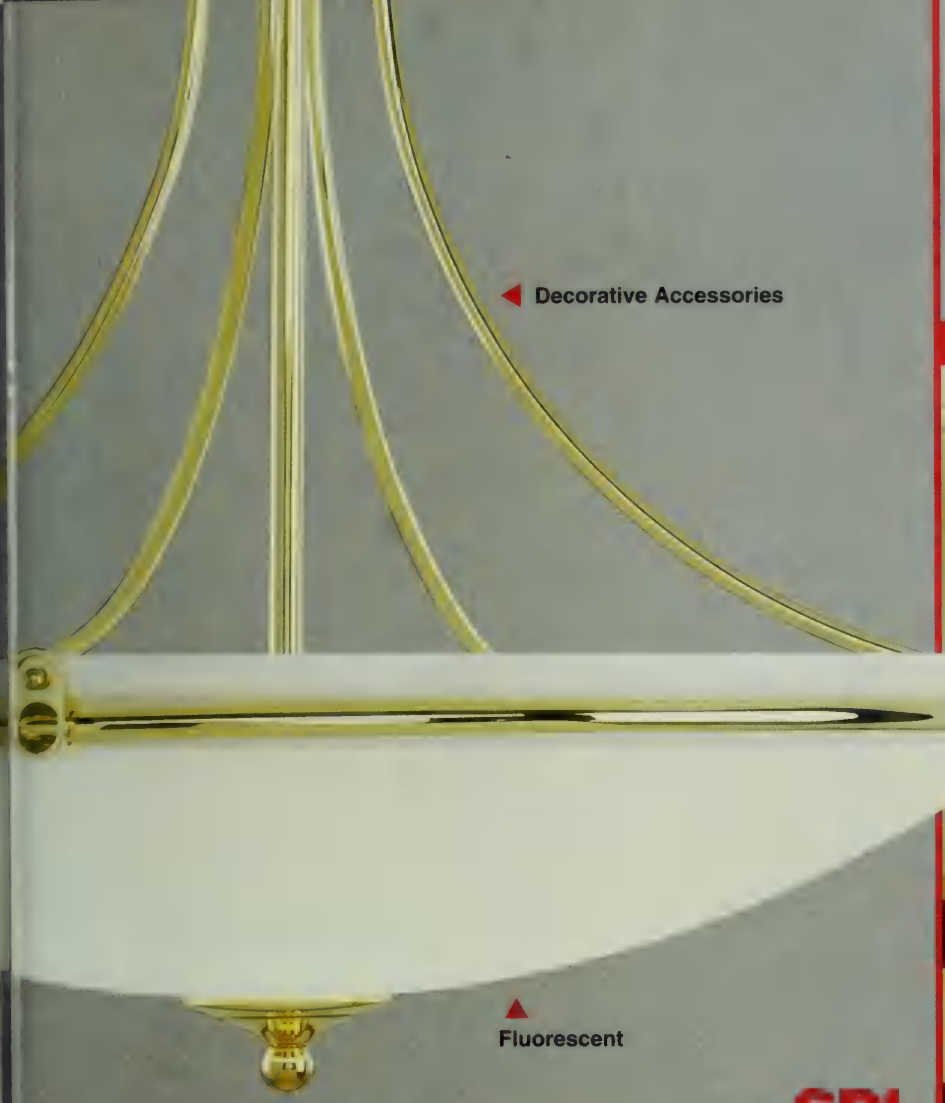
WORM'S-EYE VIEW







Fluorescent lights visually lower the scale of the 32-foot-high main library space (left). The children's area features playful furniture designed by Wendy Teague (right). The Youth Center houses many areas for active workouts (above).



Decorative Accessories

Fluorescent

SPI



CONTINUUM



Moving onward with high-efficiency fluorescent lamps and high lumen output.

Continuum begins with a classic shallow-profile housing.

Expands with elegant brass plated trims, finials and decorative stem accessories.

Multiple switching creates different lighting levels without costly dimmers.

And is completed with ceiling mounts and wall sconces.

Continuum. Another in a steady stream of advances from SPI.

TEL: 262-242-1420 FAX: 262-242-6414 E-mail: spi@spilighting.com

c UL us LISTED

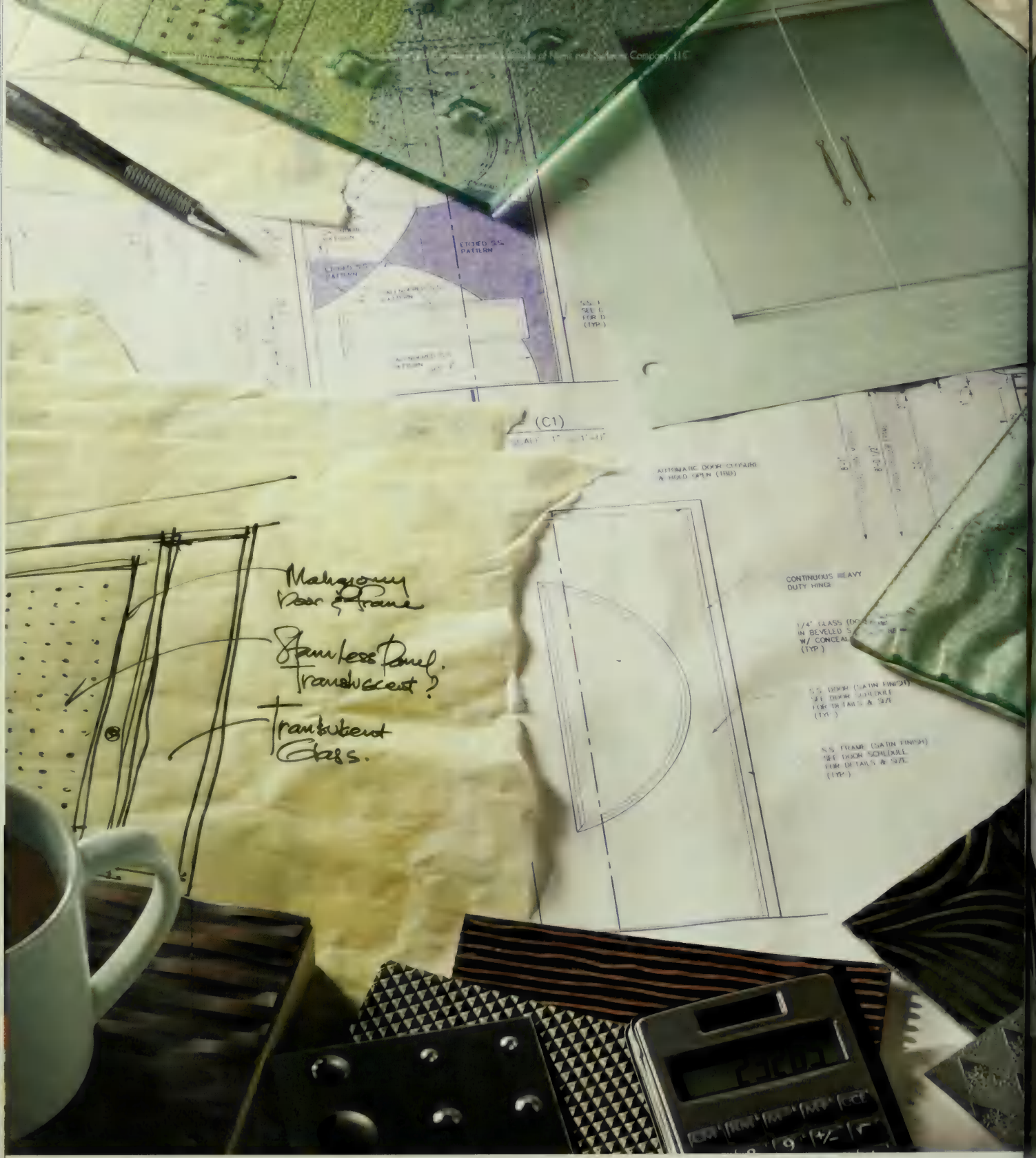


SPI Lighting Group

SPI

Advent

CIRCLE 62 ON INQUIRY CARD



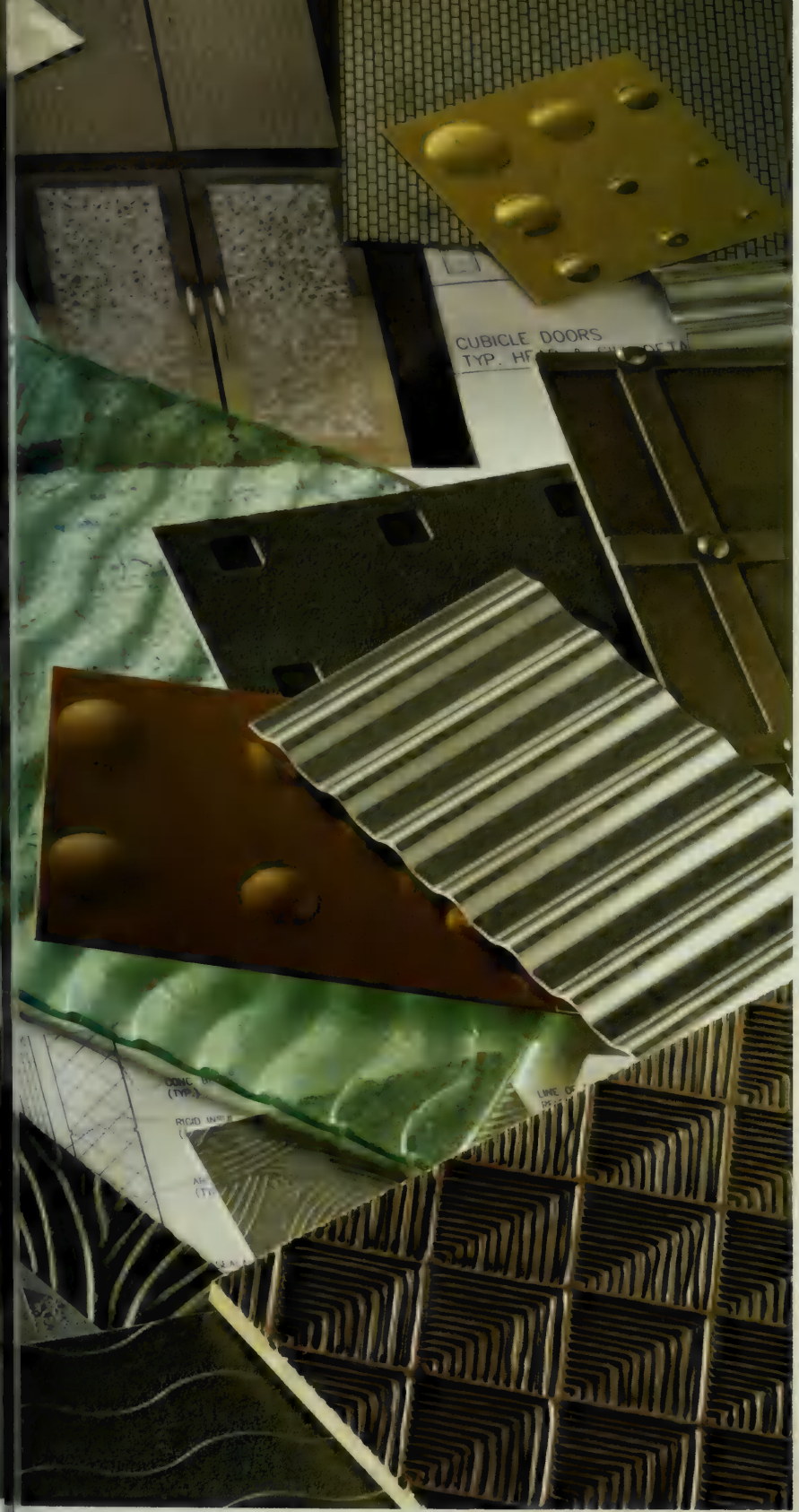
Forms+Surfaces

Six diverse manufacturing and design resources.
Unlimited possibilities.

➤ DESIGNFORM+
tel 877.525.5566
fax 805.684.7757

➤ SITEFORM+
tel 877.929.0011
fax 805.684.7757

➤ LIGHTFORM+
tel 877.828.0099
fax 805.684.7757



We're living in a materials world.

And at Surfaces+, we search the world over to bring you an incredible palette of architectural surfacing materials.

As a Forms + Surfaces company, we're part of a unique global resource development network. And, part of a whole family of companies offering a breathtaking range of complementary products from the world's most talented designers and artisans.

We invite you to explore our world. Discover how our specialized materials and custom capabilities can close the distance between your budget and your dreams.

We offer all the options you see here, and more. For doors, walls, columns, elevator cabs, architectural accents, an expressive collection of materials, textures, patterns and finishes.

Best of all, you won't have to go to the ends of the earth to get them. Just call 877.626.7788 or visit us at www.forms-surfaces.com.

Surfaces+
A FORMS+SURFACES COMPANY

· SURFACES+
tel 877.626.7788
fax 805.684.8620

➤ HARDWARE+
tel 877.323.3344
fax 805.684.8620

➤ CORNELIUS+
tel 800.553.7722
fax 412.781.7840

Designform+ Siteform+ Lightform+ Surfaces+ Hardware+ and Cornelius+ are trademarks of Forms and Surfaces Company, L

APPLICATIONS

DOORS

WALLS

CEILINGS

ELEVATOR ENTRANCES & CABS

ARCHITECTURAL ACCENTS

SPECIALIZED FABRICATIONS

MATERIALS

STAINLESS STEEL

BRONZE

BRASS

COPPER

ALUMINUM

GLASS

FUSED METAL

BONDED METAL

WOOD



From drawing board to real world.



We've made it our business to help you bridge the gap. How? By excelling at what we're known for—innovative surfacing materials and related products. Then going beyond the surface to bring you exceptional customer support. Access to sophisticated manufacturing technologies. And the ultimate in design, performance and value. It all adds up. So you can move from concept to reality without missing a beat.

Surfaces

A FORMS+SURFACES COMPANY

tel 877.626.7788 fax 805.684.8620 www.forms-surfaces.com

Creating sleek metal skins for buildings

COMPUTER TECHNOLOGY MADE THE DESIGN, FABRICATION, AND INSTALLATION OF EMP'S SKIN POSSIBLE.

By Charles Linn, AIA

If you've ever looked at one of Frank Gehry's swooping structures and thought, "What's the big deal? I could do that," the story of the fabrication of the Experience Music Project's metal skin may change your mind. As the sheet metal contractor, L. William Zahner, of A. Zahner Company says with a hearty laugh, "If I had it to do all over again, I probably wouldn't." But Zahner is being modest. Working with a digital model of the exterior of the structure provided by Frank O. Gehry and Associates, Zahner's firm accomplished something that might be regarded as impossible if it hadn't been done: The 180,000-square-foot metal skin comprises over 4,000 panels that interlock within tolerances as close as 1/16 to 1/8 of an inch. No two are alike. The panels were being fabricated at Zahner's shop in Kansas City, Mo., even as the frame of the amorphously shaped building was going up in Seattle.

Building a digital model

Sketches and study models done in Gehry's office provided the basis for creating a digital model of the building skin. "As we approach a final shape we go to bigger and bigger scale models," says architect Craig Webb of the Gehry office. The digitizing is done using a device that has an articulated arm with a probe attached to it. When the probe touches a point on the surface of the model, the x, y, and z coordinates of the point are recorded. The accuracy of the digital model of the building that was created once it had been digitized was critical, because once scaled to full size it became the basis on which the metal skin was fabricated.

The computer's software, called CATIA [see OCTOBER 1997, page 74], was developed for use by the aerospace industry. It "rationalizes" the surfaces, taking the double-curved shapes and converting them into what are called "rule-developable" surfaces. "That basically means that they can be unfolded and fabricated out of flat sheets of metal," says Webb. There were, however, limits as to how much the aluminum and stainless-steel sheets could be bent in two directions yet still be shaped and installed by hand. To predict which of the surfaces on the proposed building were curving beyond that point, Gehry's office performed another computer study called a Gaussian analysis. The analysis produces a drawing that indicates, through various colors, the extent of the curvature of different areas on the surface of the building. According to Zahner, "We used the Gaussian analysis to see if we could work out the curvature problems by changing the shapes of the pieces. In certain cases Gehry's office had to change the shape of the building a little bit, but we did our best to work with them."



Five-inch aluminum pipe girts, which could be adjusted four inches in any direction at either end as required to locate them precisely, were first anchored to structural pedestals. Next, the metal panels were installed.

Fabrication and detail development

Zahner, whose firm designed and installed the skin as a design-build contractor, worked with Wallace Engineering, also of Kansas City, Mo., to create the panel details, while developing software that would use CATIA's digital model of the building's surface to drive CNC (computer numerically

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 178 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Describe how double-curved shapes are made from flat metal sheets.

2. Explain the wind-load considerations in designing compound-curved structures.

3. Explain what an interference coating is.

WWW *For this and more continuing education go to:* **www.architecturalrecord.com**

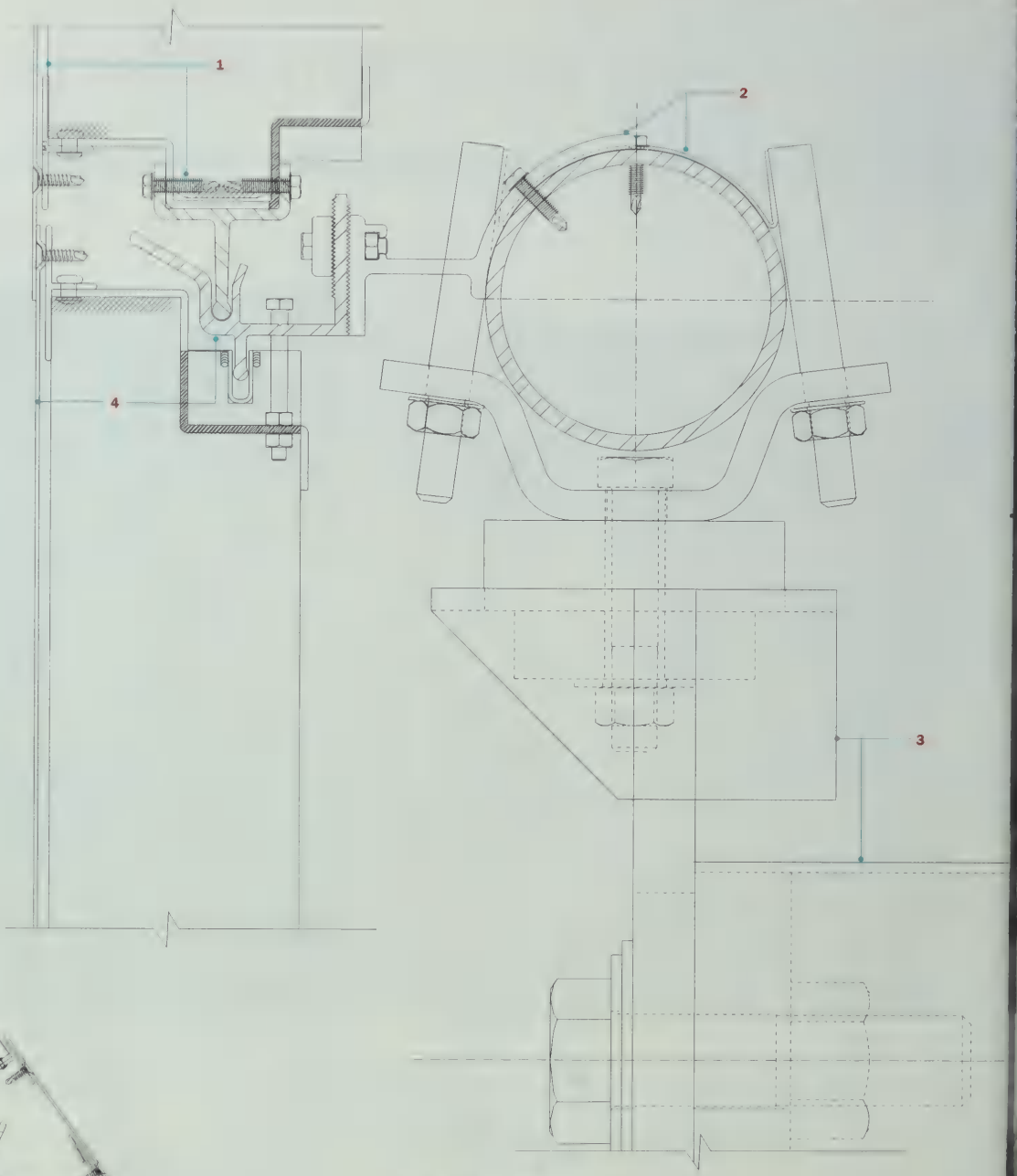
1. Sill detail. The sill extrusion has a tongue that slides into a slot in the head extrusion of the panel below.

2. Pipe girts. Five-inch-diameter pipe girts span between pairs of pedestals. Positions of the pipes are adjustable and were verified on-site using GPS.

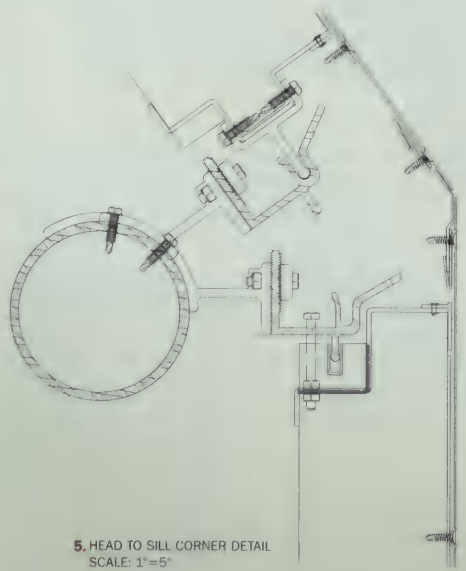
3. The pedestals, made from steel tube, extended from the main structural frame of the building through the concrete shell.

4. Head detail. Metal panels, consisting of the building's skin, structural fins, and edge extrusions, hang from the pipe girts.

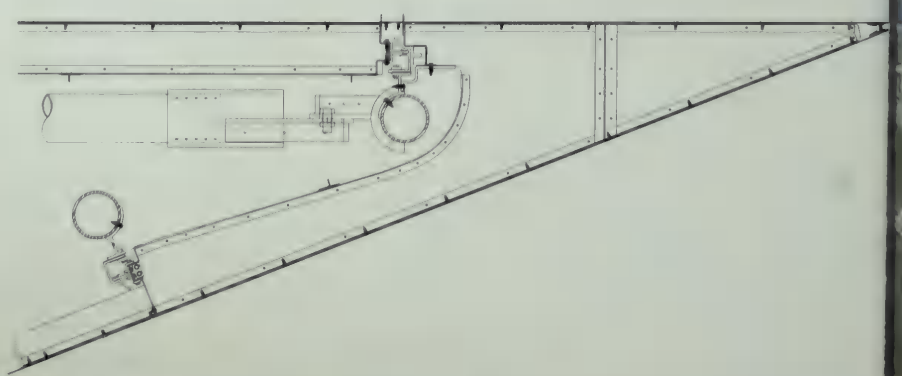
5, 6. These details show how the various components were assembled where special conditions occurred.



TYPICAL DETAIL AT PEDESTAL.
SCALE: 1"=2 1/2"

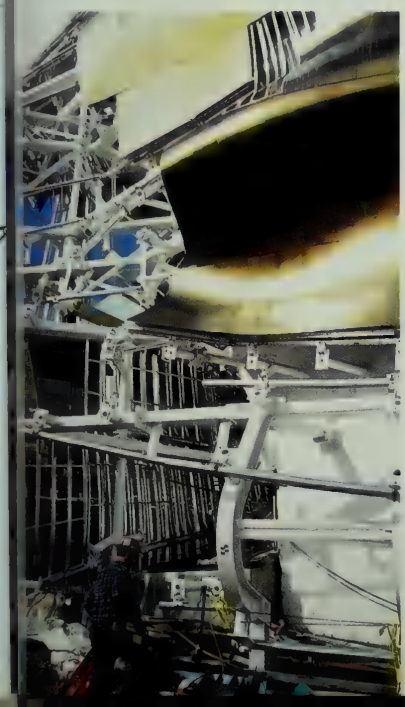


5. HEAD TO SILL CORNER DETAIL
SCALE: 1"=5"



6. SECTION AT SCOOP EDGES
SCALE: 1"=10"



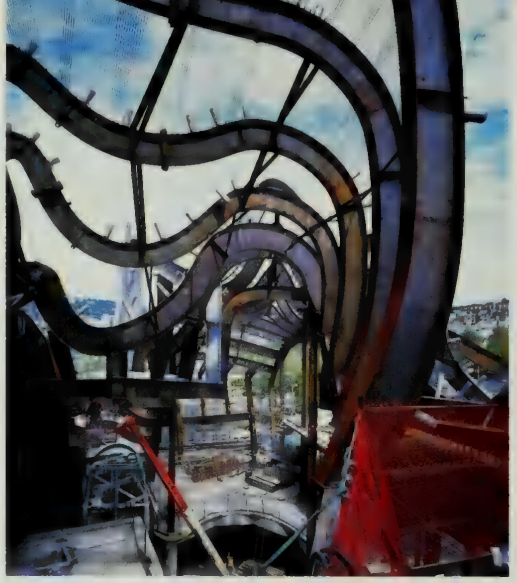






The aluminum pipe girts from which the skin panels hang are connected to steel pedestals. The pedestals, in turn, are anchored to the main structural steel frame of the building (top and left). The sloping surfaces of the building made installation of some panels extremely tricky (above).







A worker at A. Zahner Company's Kansas City, Mo., shop (left) examines a series of fins that have been assembled and await the installation of metal-skin pieces and head and sill extrusions. Shotcrete and waterproofing were applied to reinforcing steel overlaid with stainless-steel hardware cloth (top). The skin was field-applied wherever curves were extremely complex (bottom).

controlled) machines to manufacture the metal panels. As designed and built, each panel consists of extruded aluminum head and sill sections that are bolted to five-inch aluminum pipe girts; "fins," or rib-shaped pieces built out of flat aluminum sheet and T shapes; and 16-gauge metal sheets that are pressed onto the fins and fastened using high-strength aircraft pop-rivets. The metal panels are both decorative and structural,

"IF I HAD IT ALL TO DO OVER AGAIN, I PROBABLY WOULDN'T," SAYS CONTRACTOR BILL ZAHNER WITH A SMILE.

although they are not load-bearing—the head extrusions are bolted to metal hangers and clipped to the pipe girts. A tongue that runs along the bottom of each sill extrusion (see detail drawings) fits into a slot in the top of each head extrusion. This arrangement keeps the panels from moving in windy conditions, while allowing for thermal expansion and contraction. The panels are not intended to act as waterproofing—the waterproofing is applied to the building's concrete shell, which lies beneath the skin—but only as a rainscreen.

Because the panels bear only their own weight and wind loads, the task of Wallace Engineering was to examine how the load paths would affect the panels. Engineer Steve Huey explains, "Normally, when you have a flat sheet and the wind is normal to the surface, you assume that the loads will be distributed equally to the four corners. But when you have a piece with a double-reverse curve and apply a wind load to it, you may get both positive and negative pressure on the panel; one corner may take three times the load of the other corners." But doing an aerodynamic analysis of all 4,000 panels would take a lot of time, and designing for the worst-case scenario would have been wasteful. Wallace used Multiframe software to do windload simulations on groups of panels that appeared to have similar loading conditions, while collaborating with A. Zahner Company on the design and detailing of the panels.

For Zahner, the first challenge was building the panels, and the second, installing them. CNC machines were used to cut out, prepunch, and form the hundreds of thousands of metal pieces used for making the fins, skin, and aluminum pipe girts. The software driving the machines is even capable of optimizing the layout of shapes on

Building On Generations Of Experience



We're committed to the future! t EAGLE Window & Door we continue) offer a rich heritage of superior raftsmanship. Many of our employees e second- or third- generation window afters, and remain the strength and eart of our business. That's why we're investing in our community by building new, state-of-the-art manufacturing cility. From the oldest, continually- erated window and door facility in the untry (circa 1860's) to the newest, AGLE is dedicated to carrying on a ng-standing tradition. Isn't it time ou experience a legacy in the making!



For information about EAGLE, call (800)453-3633 or visit our website at www.eaglewindow.com.

© 2000 EAGLE Window & Door, Inc. - Dubuque, Iowa
An American Architectural Products Corp. Company

CIRCLE 63 ON INQUIRY CARD

each sheet to minimize waste. "In the beginning," says Zahner, "one of the hardest things for us to accept was that the pieces we were making this way would fit. We didn't trust what the computer was saying. Every other week we would clear out the shop floor and lay a bunch of the panels together. I think that was a mistake. It was time-consuming and we risked damaging the panels."

On site, accuracy was more difficult to achieve. The aluminum pipe girts were to be anchored to steel pedestals which, in turn, were welded to the main structural steel frame of the building. In some cases, the pedestals cantilevered as much as 10 feet from the frame, so the deflection in the metal frame, which might have occurred when shotcrete was applied to the shell, would be multiplied over their lengths.

To solve the problem, Zahner made a device that allowed the location of the pipe girts to be adjusted in any direction within a four-inch "sphere." GPS technology was used to verify the girts' locations, which were initially provided by CATIA. "It would have been great to survey these locations and then make the panels," says Zahner, but it would have delayed completion of the project by many months.



The golden sheen on the stainless-steel skin comes from an "interference coating" applied to the metal by Rimex Metals. Enamel was baked onto the aluminum skin.

Finishing the skin

The colors of the stainless steel were achieved through an "interference coating" applied to the raw metal in England by Rimex Metals, specialists in applying coatings to metal products. The finish is called an interference coating because it interferes with the natural reflection of the spectrum of light, absorbing selected wavelengths and reflecting the desired color. The painted sections of the building were fabricated of coil-painted aluminum. In this process, an extremely thin coat of enamel is applied to uncoiled aluminum sheet, using a procedure similar in concept to silk-screening. The coated sheet is passed through an oven where the enamel is baked, then the sheet is recoiled.

"I've heard Frank Gehry say that he wants to return to the ways of the master builder," says Bill Zahner. "He wants to be able to control my shop floor from his office. And this method of working together comes pretty darned close. The system we developed together allows more complex geometries to be developed at a more affordable price than ever before. It has permanently changed the way we do business." ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "Creating Sleek Metal Skins for Buildings" using the learning objectives provided.
- Complete the questions below, then check your answers [page 266].
- Fill out and submit the AIA/CES education reporting form [page 266] or file the form on ARCHITECTURAL RECORD's Web site at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

1. What is the design process for creating a curved metal building skin?

2. Why was the Gaussian analysis used?

3. What keeps the metal panels from moving in windy conditions?

4. What is an interference coating?

5. How do curved metal sheets react differently to wind than flat sheets?

"Shape defines space. Texture refines it."

Angie Lee doesn't design a room, she creates an environment with a purpose. She reaches new heights of inspiration with the versatility of texture and form. "A ceiling is the finishing element in framing the overall harmony of a room. Its creative energy can define what the room is," says Angie. Define and refine with CURVATURA™ ELITE and any of our fine textured *CLIMAPLUS*™ acoustical panels, such as MILLENNIA®, ECLIPSE™, MARS™ or FROST™, with our DONN® Brand suspension systems. Call us at 877 874-4200 or visit our website:www.usg.com.



Angie Lee, AIA, IIDA
Principal, Director of Corporate Practice
OWP&P

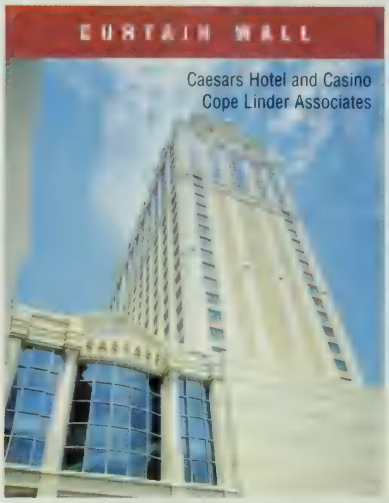
CIRCLE 64 ON INQUIRY CARD

USG CEILING SYSTEMS

Imagine The Upside.

SUPERIOR INN-TELLIGENCE









Whether for business or pleasure, it's always good to travel to a destination that's memorable.

At The Vistawall Group, we help create destinations of distinction from Connecticut to California.

From our curtainwall and skylights to our custom windows and doors, we help develop hotels that are INN-spirational.

The Vistawall Group has provided architectural products for some of the finest hotels in the country. We're your single source supplier: designing, engineering and manufacturing custom products for everything from roadside inns to major convention hotels.

The Vistawall Group. We're the INN-telligent choice.

THE VISTAWALL GROUP
BUTLER MANUFACTURING COMPANY

800-869-4567
fax: (972) 551-6264
http:\\www.vistawall.com

THE VISTAWALL GROUP
BUTLER MANUFACTURING COMPANY

VISTAWALL ARCHITECTURAL PRODUCTS
MODULINE WINDOW SYSTEMS
NATURALITE SKYLIGHT SYSTEMS
SKYWALL TRANSLUCENT SYSTEMS

CIRCLE 65 ON INQUIRY CARD

Tech Briefs

BEES software weighs performance data on green solutions ▪ Green roofs grow in numbers by popular demand

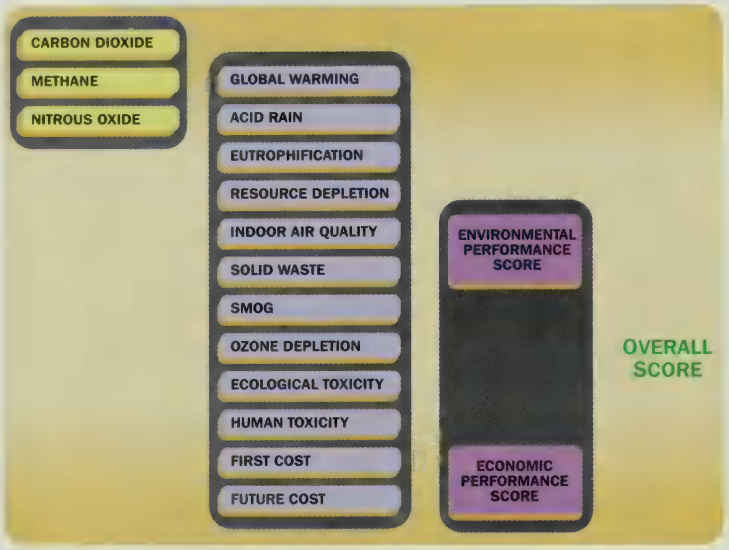
What's the Buzz: Use BEES to Design Greener, Lower-Cost Buildings

Designers are increasingly asked to address the issue of "green" building materials. How do you identify environmentally preferable products? Is a product environmentally preferable if it has recycled content? Is it not preferable if it offgasses during use? Are mainstream products always less preferable than products marketed and perceived as "environmentally friendly"? Do environmentally preferable products always cost more? Not necessarily, according to the BEES (Building for Environmental and Economic Sustainability) software.

BEES 2.0, an updated, expanded version of the powerful software designed to help the construction industry select cost-effective "green" building products, can be downloaded to your computer for free (www.bfrl.nist.gov/oae/bees.html). BEES Version 2.0 is aimed at designers, builders, and product manufacturers, and it includes comparative environmental and economic performance data for over 65 building products.

The National Institute of Standards and Technology (NIST) Building and Fire Research Laboratory began developing the decision-making tool in 1994 to help the design community measure a product's environmental and economic impact. The idea was to provide key science-based information often lacking in product-selection decisions. The NIST research has been supported by the U.S. EPA Environmentally Preferable Purchasing Program and the White House–sponsored Partnership for Advancing Technology in Housing (PATH).

BEES 2.0 evaluates generic products for framing, exterior and interior wall finishes, wall and roof sheathing, ceiling and wall insulation, roof and floor coverings, slabs, basement walls, beams, columns, parking-lot paving, and driveways. Each product category contains U.S. average performance data for competing products. For example, the "floor covering" category surveys ceramic tile, linoleum, vinyl tile, different types of carpets, marble, and terrazzo. Similarly, exterior wall alternatives include brick, stucco, and aluminum, cedar, and vinyl siding. Future BEES versions will evaluate brand-specific products, allowing for benchmarking against generic product performance. (To that end, manufacturers are encouraged to submit brand-specific product performance data through the new BEES Please program—contact: blippiatt@nist.gov.)



Computing the BEES Overall Performance Score: Environmental and economic performance scores are combined into an overall performance score.

BEES measures the environmental performance of building products using the internationally standardized and science-based Life-Cycle Assessment method. All stages in the life of a product are analyzed: raw material acquisition, manufacture, transportation, installation, use, and recycling and waste management. The environmental-impact analysis measures the product's impact on global warming, acidification, eutrophication (the unwanted addition of mineral nutrients to the soil and water), indoor air quality, resource depletion, and solid waste. In addition, the new software assesses ozone depletion, smog, ecological toxicity, and human toxicity for a number of products.

Due to its comprehensive, multi-dimensional scope, BEES can account for shifts of environmental burdens from one life-cycle stage to another, or one environmental medium (land, air, or water) to another. The tool highlights the trade-offs that must be made to genuinely reduce overall environmental impacts.

BEES measures economic performance using similar life-cycle thinking. Economic performance is measured using the ASTM standard Life-Cycle Cost method, which covers the costs of initial investment, replacement, operation, maintenance and repair, and disposal. Environmental and economic performance scores are combined into an overall performance score. The BEES user specifies the relative importance weights used to combine environmental and economic performance scores and may test the sensitivity of the overall scores to different sets of relative importance weights.

Applying the BEES approach to the scores of products included in BEES 2.0 leads to several general conclusions. First, environmental claims based on single impacts, such as recycled content alone, should be viewed with skepticism. These claims do not account for the fact that one impact may have been improved at the expense of others. Second, measures must always be quantified on a functional unit basis as they are in BEES, so that the products being compared are true substitutes for one another. One roof covering product may be environmentally superior to another on a pound-for-pound basis, but if that product requires twice the mass as the other to cover one square foot of roof, the results may reverse. Third, a product may contain a negative-impact constituent, but if that constituent is a small portion of an otherwise relatively benign product, its significance decreases dramatically. Finally, a short-lived, low-first-cost product is often not the cost-effective alternative. A higher first cost may be justified many times over for a durable, maintenance-free product. In sum, the answers lie in the trade-offs.

Barbara C. Lippiatt

WWW *for more about sustainable architecture go to* ***Green Architect*** *at* ***www.architecturalrecord.com***

The Grass Is Greener on the Topside with These Innovative Roofing Systems



Extensive Sarnavert Green Roof System, Zurich, Switzerland

Grass roofs have historically been massive and weighty. Scandinavia's traditional sod homes or homes of the Great Plains settlers relied on the roof mass to temper interior spaces. Current earth-sheltered architecture utilizes the same principles of reducing energy requirements.

Wide use in different epochs, climates, and cultures has not exhausted new practices and products that are pushing green-roof developments even further. An emerging area in the movement, at least in the U.S., is a lightweight version of these earlier precedents, one that blankets the entire roof with a thin growing medium suitable for low vegetation.

In contrast to earlier systems, the light weight of these new roofs places little additional load on the structural system. Often, green roofs are installed directly onto existing buildings. They are common in northern Europe today: they cover many flat and pitched roofs in Germany, where the technologies are well developed through three decades of use.

Major U.S. roofing companies, such as Hydrotech and Sarnafil, are now actively marketing two green-roof systems in North America, teaming with German-based firms ZinCo and Optigrün, respectively. One is the "extensive" roof system, a shallow, two-to-six-inch soil depth that supports grasses and sedums capable of withstanding harsh growing conditions and requires low-to-no maintenance. The other is the "intensive" roof system that supports a wide variety of plants, shrubs, and small trees and requires six or more inches of soil.

Beyond these differences, both systems provide waterproofing, drainage, water/nutrient retention, and a growing medium, with thermal and acoustic insulation that exceeds conventional roofs. New green roofs weigh a fraction of their predecessors, which often topped 150 pounds per square foot.

Green roofs offer particular advantages in cramped urban settings. Intensive roofs, in fact, become an amenity, serving as terraces or other occupiable green spaces. Whether used to reclaim lost space or simply provide a verdant view, these roofs offer many advantages that extend beyond the obvious benefits to owners and occupants.

Green-roof plants help counter the heat island effect through evaporative cooling, and they convert carbon dioxide to oxygen. They also absorb and retain precipitation, reducing storm water runoff 50 to 90 percent. Some German municipalities actively encourage green roofs for these reasons, offering tax incentives to reduce sewer system loads and easing zoning codes to allow greater site-development freedom if systems recapture greenery.

The U.S. lacks such incentives, but several projects have gained prominence. James Stewart Polshek's Mashantucket Pequot Museum & Research Center in Ledyard, Conn., features a 60,000-square-foot green roof. On the other coast, in Mountain View, Calif., a green roof covers Hoover and Associates' Alka headquarters. Given this geographic dispersion—with additional projects in between—drainage medium, soil depth, and plant specimens must be based upon local conditions.

William McDonough addressed this point in discussing his Gap office complex in San Bruno, Calif., noting that airborne birds can't distinguish a building from the natural landscape. The undulating roof's plantings, all native to the region, blend seamlessly with the landscape. At the Mashantucket Pequot Museum, landscaping and roofscape are also conceived as a single entity. Roofmeadow (affiliated with Optigrün) even markets an extensive roof system with a regional plant palette—the Philadelphia Roofmeadow—tailored to the mid-Atlantic coast.



Gap Office Complex, San Bruno, Calif.

For all the positive benefits of green roofs, they face obstacles, including initial costs and the inertia of standard practice. A green roof requires a waterproofing system and additional components to support the plants themselves. Even a shallow, extensive green roof runs at least $3-$6 beyond what an owner would ordinarily spend. Furthermore, green roofs run counter to conventional practice; they absorb and retain water for plants instead of shedding it immediately as do traditional roofs.



Mashantucket Pequot Museum, Ledyard, Conn.

We don't yet have government incentives in the U.S. to propel the use of green roofs, but there is interest. Chicago City Hall's roofscape is being transformed with a green roof. The project, stemming from EPA/NASA heat-island studies, intends to demonstrate how green roofs moderate summer temperatures in the city.

The early Modernists eloquently noted how flat roofs were habitable areas that were not thoughtfully developed. Green roofs, which most readily cover this roof form, are an emerging design vocabulary that positively addresses this fifth facade, while offering substantive benefits.

For further information, see www. hydro-techusa.com/garden, www. rnafilus.com/Green Roofs, www.roofmeadow. com, and www.architecturalrecord.com.

Todd Willmert



CASCADE™

Designed with flexibility in mind, Cascade may be mounted for direct or indirect illumination. Create the desired effect for your outdoor application by selecting lamping for ambient light or adjustable PAR lamps for specific light output.

Select from one of three styles available in sizes ranging from 18 to 32 inches in length. To create your own design, Cascade easily accommodates custom window patterns or trim bar configurations.

For more information, contact:

VISA LIGHTING
An Oldenburg Group Company

8600 West Bradley Road • Milwaukee, Wisconsin 53224
414-354-6600 • Fax: 414 354-7436
www.visalighting.com

1-800-788-VISA

CIRCLE 66 ON INQUIRY CARD

Put some virtuosity back into your designs.

Give your architectural designs the visual impact they need with ArchiCAD.



Virtual building modeled and rendered in ArchiCAD by Mr. Peter Bach and Mr. Peter Hadadi.

It's a paintbrush on a blank canvas. A sharp chisel ready to cut stone. It's ArchiCAD software. The ultimate architect's tool. ArchiCAD's easy-to-use interface allows architects and designers to create, rather than draw, to build rather than draft. It offers cutting edge presentation features, automatic documentation, intelligent objects, and is fully compatible with AutoCAD. Graphisoft has been developing design solutions around the building simulation philosophy for 18 years.

We invite you to look at the standard in automated building simulation and documentation. It comes with a 30-day guarantee, and getting our CAD productivity kit on how to move from any software to ArchiCAD is as easy as calling **888.314.5042**. Or visit our website at **www.worksthewayyoudo.com**.

Here's what architects had to say about our software:

"Traditionally, you don't know if a project is a success until you walk in the building after the painters have left. ArchiCAD allows the client to look behind the curtain; they don't have to read the architect's mind."

MICHAEL HRICAK, AIA, PARTNER,
ROCKEFELLER/HRICAK ARCHITECTS

"My customers have become accustomed to asking 'Can I see what this would look like?' They know I can make the change and show them the results right then, or e-mail it to them later."

MIKE OSTERMANN, OWNER,
OSTERMANN HOME DESIGN AND MILESTONE STUDIO

"ArchiCAD has given us a tremendous amount of power, and it has a short learning curve."

MALCOLM DEIGHTON, CO-OWNER,
DEIGHTON GIBBS ARCHITECTS



It leaps over the competition.

CIRCLE 67 ON INQUIR

GRAPHISOFT® ArchiCAD®

Digital Architect

Emerging standards for design data

By Jerry Laiserin, FAIA

The process of designing, constructing, and operating buildings is among the least computerized of all industries. Software is available to help architects and their collaborators perform all their tasks—from computer-aided design to computer-aided facility management—yet integrating those individually automated tasks into a cohesive process that spans the building life cycle remains an unfulfilled promise. Even World Wide Web technology has failed to transform the highly fragmented businesses of architecture, engineering, and construction. Recent advances in software standards, however, point toward new kinds of communication among software programs that will, in turn, support new kinds of collaboration among all project team members.

The here and now

Current AEC software provides diverse descriptions without capturing the entire picture. CAD has been limited to describing the geometry of a building and its constituent parts, and different CAD programs use incompatible internal formats to store their data (*see* "Digital Architect," MAY 1999, pages 57–58).

Definitions of windows, wall sconces, or water closets may be represented in different cost-estimating or specification programs by various internal codes, often incompatible with one another and with the descriptions in any CAD program. Similar incompatibilities hold true for software that aids building-code analysis, energy performance, and lighting simulation.

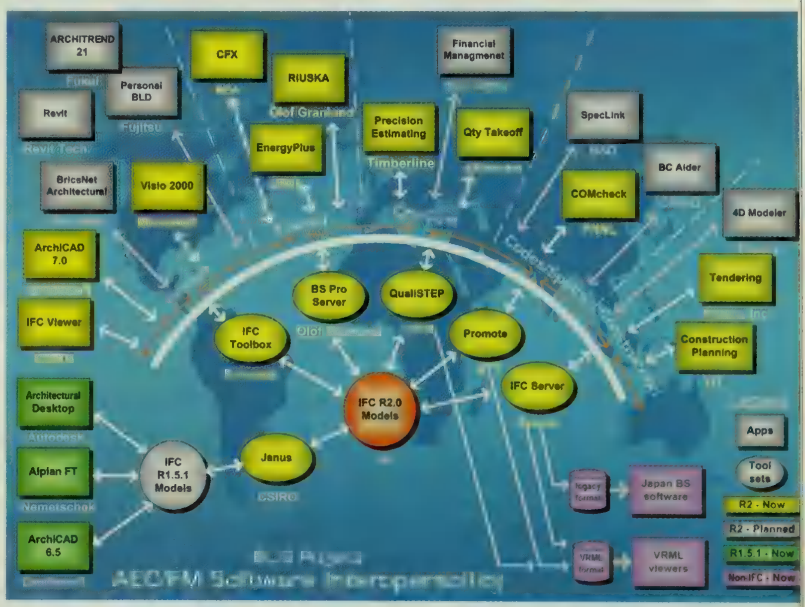
The cumulative effect of these software incompatibilities is that the AEC industry cranks out digital drawings and project manuals that are scarcely better coordinated or more dynamic than their paper-based antecedents, despite 20 years of effort and hundreds of millions of dollars. Consultants and contractors who work with architects' output often must translate files into their own software or extract architects' data into some neutral format prior to importing it. These processes are both time-consuming and error-prone. Occasionally, if the design issues are important enough and the project budget large, multiple involved parties will resort to building many independent software models of the same building, for their separate analyses (*see* "Digital Architect," AUGUST 2000, pages 177–78).

While it is possible for large or tech-savvy design firms to develop custom linkages between their CAD programs and other software, such customization is costly and subject to obsolescence whenever the underlying programs are upgraded. Recently, CAD vendors began creating predefined links from their proprietary design packages to other tools, such as estimating or specifying software. Bentley Systems (Microstation), Graphisoft (ArchiCAD), and Revit Technology (Revit) are among the leaders in this regard, but users remain limited by specific links between, say, one CAD program and one estimating database, not a freely interchangeable set of building data that works with any software. The real goal—the "grand unified theory" of AEC software—is for any two programs to be able to interact with, or operate on, each other's data. Programs that can do so are said to be "interoperable."

Stepping into the future

In July 1995 an industry alliance initially led by Autodesk, HOK, Carrier, AT&T and others launched a standards effort now known as the International Alliance for Interoperability (IAI). With several hundred members (including the AIA) in every industrialized country, IAI devoted most of its efforts from 1995 to 2000 to building a consensus around a set of definitions and descriptions for all the elements of buildings and attributes of those elements (*see* "Digital Architect," NOVEMBER 1999, pages 33–34). This is not a computer language, but something that logicians call a taxonomy, a classification system for every aspect of design, construction, and building operation. For example, the attributes that together constitute the "doorness" of a door include its swing, size, material, hardware, keying, finish, etc. This system is codified in a set of software standards called Industry Foundation Classes, or IFCs, that amount to universal, virtual representations of building elements. The IFCs are now in version 1.5.1 but soon will be upgraded to IFC2x.

According to Richard Geissler, executive director of IAI North America, IFCs constitute "a set of



Building Life-cycle Interoperability Software (BLIS) demonstrates the ability of any IFC-compliant programs to operate on one another's building model data.

Contributing editor Jerry Laiserin, FAIA, served as executive director of the aecXML project during its six-month start-up phase.

process definitions sufficiently universal to apply across the full spectrum of AEC business, from energy analyses to project plans." IFC-compliant programs don't just share common definitions of building components; they operate on a software building model assembled from such components by any other IFC-compliant software. The first certified implementers of IFC1.5.1, announced in mid-2000, include Graphisoft, Autodesk (AutoCAD), and Nemetschek AG (the German maker of AllPlan software, not the Nemetschek North America subsidiary that produces VectorWorks software).

Analysts estimate that widespread adoption of IFCs could slash by 70 percent the wasted effort in translating or duplicating data from one software model to another. This would free the design team to focus on quality improvement, such as energy performance or construction coordination. IFCs will provide a competitive edge to the software companies that promote them and to AEC businesses that adopt IFC-compliant software.

"X" marks the spot

The Internet might seem ideally suited to sharing data in IFC-based models, but IFCs were conceived in 1995, before the Internet had matured, and therefore they evolved without regard to Internet compatibility. While it is easy to publish building information, such as code requirements and fire ratings, on a Web site, the standard HyperText Markup Language (HTML) for Web publishing deals only with the format or appearance of information, not with its meaning. Thus, a standard Web site that uses HTML cannot determine whether a number is a quantity, a date, a unit of measure, or a unit of currency. Ever-ingenious Internet developers recently devised a way to extend HTML so as to define content, and they called the result XML (eXtensible Markup Language). In August 1999 an industry project initially led by Bentley Systems, Primavera Systems, Bidcom, and the McGraw-Hill Construction Information Group (which publishes RECORD) launched a project to develop a subset of XML tailored to content and meanings appropriate to AEC business.

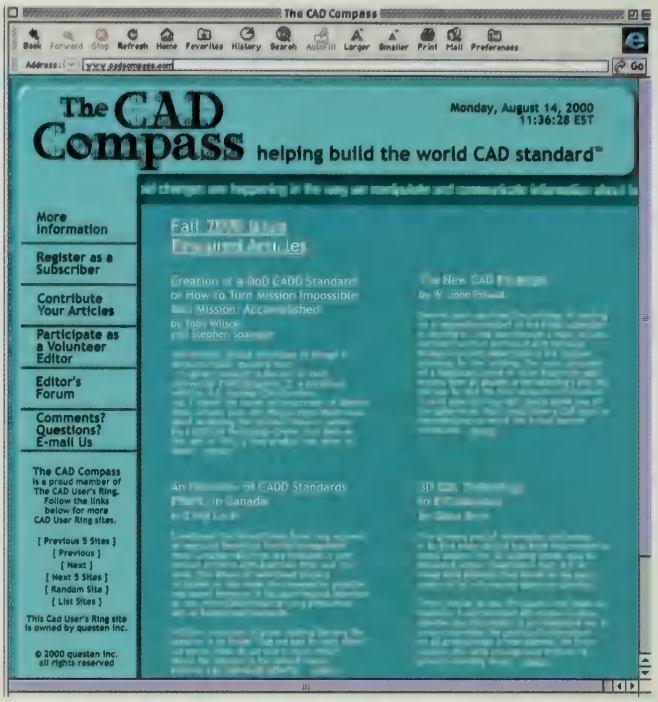
The resulting aecXML Project quickly attracted widespread industry support, including significant overlap with the membership of IAI. It soon became obvious to all concerned that aecXML and the IFCs were complementary ways of addressing similar problems. By January 2000, all work on aecXML moved under the organizational umbrella of IAI, as a committee chaired by Keith Bentley of Bentley Systems. Dozens of companies and organizations have proposed subsets of aecXML content descriptions, called schema, and IAI director Geissler expects they will be consolidated into an approved aecXML version 1.0 schema by the end of the year. Then architects using software that adheres to the aecXML schema will be able to click on design elements represented in their CAD program, for example, and automatically launch a Web search for building products with aecXML-tagged attributes matching the design requirements.

EVEN WORLD WIDE WEB TECHNOLOGY HAS FAILED TO TRANSFORM THE FRAGMENTED BUSINESSES OF ARCHITECTURE.

With commercially usable versions of IFCs available now and versions of aecXML becoming available soon, the key question for designers, specifiers, and builders is, Which does what? Duane Barrett, a product manager with Bentley Systems who serves as vice chair of IAI's aecXML committee, says, "IFCs were developed to transfer entire data sets from one CAD platform to another with no loss of information, whereas aecXML does not capture complete model information but only transfers requested attributes." In other words, aecXML is both more specific and more adaptable than the IFCs, and IFCs are more comprehensive and universal than aecXML.

Because the current versions of IFCs and aecXML define building elements by slightly different technical means, their software implementations will initially be used for different tasks. For example, aecXML need only transfer a few descriptive attributes of fire-rated assemblies to enable a CAD program and a code-checking program to "talk" to each other about a specific design issue, such as the placement of three-quarter-hour doors in one-hour partitions. Deploying the entire IFC "object model" would be overkill in that limited context. Yet in a more general context, such as interactive modeling of a building envelope, energy performance, and construction cost, the comprehensiveness of the IFC approach works better. Through the Building Life-cycle Interoperability Software (BLIS) Project, an informal cooperative group of IAI members has successfully demonstrated interoperability using IFCs among a dozen disparate programs all sharing the same building model data.

Both Geissler and Barrett agree that aecXML eventually will be able to derive information from IFCs, and that IFCs, in turn, will use aecXML as an Internet extension. Until that convergence occurs, software users will have to rely on their program suppliers to decide which standard is best suited to which type of design transaction. Careful software shoppers who want to avoid prematurely obsolete technology should start inquiring about their vendors' plans to adopt aecXML and to get their products IAI/IFC certified. As Tamas Hajas, president of Graphisoft U.S., observes, "Using these industry formats guarantees companies that their choice of design software never turns into a dead end." ■



The CAD Compass, www.cadcompass.com, is a new Internet site exclusively devoted to emerging standards for design software.

WWW *For a list of vendors involved in the IAI and concerned with interoperable products and services go to* ***Digital Architect*** *at:* ***www.architecturalrecord.com***

START SOMEWHERE.

BRIC ROAD.



NEW DESTINATIONS. ONE STEP AT A TIME.

Right now, you don't need an end-to-end, b2b, dot.com, all-inclusive, integrated, clicks and mortar solution to manage the building process. Today, you just need to save time and money. Fast. Bricsnet has solutions you can use immediately to speed up the building process. So start somewhere simple. And when you are ready for the future — you'll have something you can really build on. Visit Bricsnet.com today.

bricsnet

BUILD ON IT.

CIRCLE 68 ON INQUIRY CARD

Copyright © 2000 BRICSNET. All rights reserved. Bricsnet, the Bricsnet logo, and Build on it, are trademarks of Bricsnet N.V.

WIREMOLD

Infloor Wire & Cable Management





Increased workstation specialization means a "one size fits all" approach to providing wire and cable in open plan space is falling from favor. Instead, there is now a premium on systems that have the capacity and flexibility to meet all current and future workstation demands. At the same time, aesthetic considerations demand that the wire and cable infrastructure be as unobtrusive as possible.

In many new buildings, particularly those with open plans, infloor wire and cable management systems offer maximum efficiency and aesthetics. These fully integrated systems effectively manage complex data/communications requirements in environments where flexibility is a paramount concern. And, because these systems are located within or under floors and have flush or recessed power and data connections, they are practically invisible.

Infloor wire and cable management systems are particularly effective for large, open areas such as offices with modular partitions, schools, and retail stores. They can also be used to provide service to partitioned spaces, such as private offices, training centers, and conference rooms. These systems include:

- Underfloor duct
- Cellular and cellular deck systems
- Floor boxes
- Poke-thru devices
- Raised floor systems

SYSTEM CONSIDERATIONS

The location and capacity of infloor wire and cable management systems are critical concerns that ultimately depend on workstation requirements. In fact, the central importance of the workstation dictates that the selection of an infloor wire and cable management system begins at the workstation and works back toward electrical closets and telecommunications rooms.

Determine service requirements. Typical workstations require a minimum of five services: filtered, surge protected, isolated ground AC power; unfiltered AC power; LAN connection; internet connection; and telephone line(s). A growing number of workstations also need specialized services, such as video, and/or multiple monitors. Outlets and jacks may be built into modular furniture, attached to the surface of partitions, or located in the floor, independent of any furniture.



AIA/ ARCHITECTURAL RECORD CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Infloor Wire** *& Cable Management*. To earn one AIA/CES Learning Unit including one hour of health safety welfare credit, answer the questions on page 192 and follow the reporting instructions on page 266. Or use the Continuing Education self-report form on Record's web site -- www.architecturalrecord.com.

Learning Objectives:

- Explain how wire and cable systems can lend flexiblity to an interior environment.
- Describe the different considerations in selecting a system.
- Describe variations of infloor duct systems.

Determine system density. Cellular and duct systems are laid out in a grid pattern. Floor boxes, poke-thru devices, and raised floor systems are not constrained by a grid, though they are frequently installed in such a pattern. In all cases, infloor systems offer nearly unlimited flexibility to choose the density of service for a particular area. This density must be balanced against the project budget and the capacity of the wire and cable management system.



Locate distribution system. Since wire congestion is most likely to occur near service closets and in feeder runs, careful planning is needed to eliminate this concern. Dividing the area to be wired into zones can reduce the size of the feeder run by lowering the number of workstations it will be required to feed. Optimal placement of feeder runs also lowers wire pulling distance, reduces feeder size, and minimizes the amount of feeder required.

INFLOOR WIRE & CABLE MANAGEMENT SOLUTIONS

Cellular and cellular deck systems combine separate wire and cable channels in a single, unified infloor raceway that is encased in the concrete pour. If a building is of steel frame construction, a cellular deck system serves as part of the steel reinforcement for the slab, as well as a wire and cable management system. Both systems offer moderate to high capacity and options to meet all service density requirements.

In order to maximize the benefits of these systems, close coordination is required between the owner, architect, electrical engineer, and structural engineer. Not only is this good design practice, but in the case of infloor distribution systems the specification channels themselves can differ. Deck systems are considered structural components and are specified through Division 5, while other infloor systems are specified through Division 16 (electrical). Infloor distribution products specified in multiple divisions should be coordinated with one another to ensure compatibility.

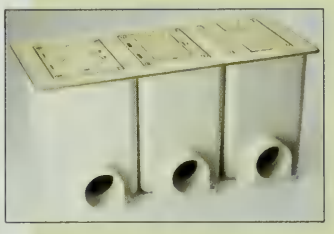
Underfloor duct systems offer support and security for power and data/communications wiring in reinforced concrete and steel construction. These duct systems have been employed with great success for decades and, although cabling has increased in volume and complexity, properly designed systems can accommodate even the most complex power, voice, data, and other wiring and cabling.



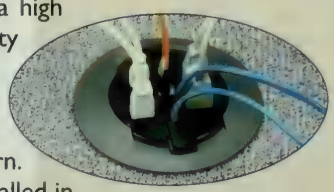
Available in a variety of sizes and configurations, underfloor duct systems provide separate channels for power and data/communications systems. Junction boxes facilitate cable pulling and allow cabling to be added or upgraded. Users access single points of service for workstations through low profile or flush service activations, which may be located anywhere along the duct run.

Trenchduct is a variant of infloor duct. The duct is set into concrete, but the removable cover is flush with the floor, providing ease of access and lay-in installation capability. Trenchduct is used in high-capacity applications and as a feeder system for other infloor wire and cable management systems.

Floor boxes are ideal for low-density, low-churn applications, and for providing cost-effective wire and cable management in open space areas. Single and multiple gang boxes are available. If the application is on-grade, a cast iron floor box or an approved on-grade stamped steel floor box may be needed. If the application is above-grade, a stamped steel or nonmetallic floor box may be appropriate. Floor boxes are available in both shallow and deep versions with a wide array of round and rectangular covers.



Poke-thru devices offer a high degree of design flexibility for open office space, since their placement is not constrained by partitions or by the grid pattern. Poke-thru devices are installed in core-drilled holes that enable wires and cabling to penetrate from plenum space below through the concrete slab. The only limitations are the presence of major structural components such as beams, and the rare instances where there is no available plenum space (since poke-thru devices require plenum access, they cannot be used in slab-on-grade applications). The UL fire resistance directory details the standard for poke-thru specifications as a "minimum of 2' on-center and not more than 1 insert per 65 sq. ft. of floor area in each span."



In general, poke-thru systems are most advantageous in structures where low churn rates are anticipated or where churn does not result in physical alterations. Among commonly installed wire and cable management systems, poke-thru devices typically have low initial installation cost. However, the cost to add or relocate a device is relatively high because of the need to drill a new hole, purchase a new device, and open the plenum space for installation.



Raised floor systems are sometimes the most cost-effective solution, especially when the highest levels of capacity and flexibility are required. With workstations requiring more voice and data services than ever, raised floors are no longer confined to computer rooms. Low-profile floors have significantly reduced the vertical space requirement for these systems. In addition to providing the physical space for wires and cables, raised floors provide the added advantage of convenient access to power and data/communications outlets that are housed in raised floor boxes.

In order to maximize the flexibility and cost benefits of raised floors, many designers are now also specifying manufactured wiring systems. A manufactured wiring system consists of factory-assembled connectors and modular cable assemblies that connect raised floor boxes to electrical and data/communications systems. If a box must be relocated it is a simple matter to unplug the cable set, move the box to a new floor cut-out, and plug the cable set back in. An estimated 45 to 55 percent of raised floor systems now employ a manufactured wiring system instead of conduit.

AN INTEGRAL INFRASTRUCTURE

Wire and cable management systems are part of an integral, building-wide infrastructure that is of critical importance to owners. The design team should work closely with client's technology managers to understand their data/communications concerns and meet their requirements in ways that will not compromise aesthetics. Infloor systems in particular must be considered early in the design process – rather than leaving it until later.

Such an approach maximizes flexibility and protects the original design against the unplanned intrusions that can result when wire and cable management is not addressed until late in the process. Even a well-designed network can fail to live up to expectations if it is locked into an inflexible, difficult-to-change cabling infrastructure. The accessible design of infloor wire and cable management systems enables them to support both operational and systems flexibility. Operation flexibility encompasses the day-to-day or month-to-month changes required for the workplace to keep pace with the functions being performed in it. Systems flexibility enables a facility to accommodate new or expanded communications technologies over the long term.

ACCOMMODATING FIBER OPTICS

The use of optical fiber cable in horizontal applic tions, frequently called fiber-to-the-desk, has focuse attention on the effect of bend radius on system pe formance and the need to maintain a specified cab bend radius at all points of the cabling pathway.

The TIA/EIA and the American National Standar Institute (ANSI) have recently approved a bend radi standard for fiber optic cable. Of particular concern selecting and installing cabling pathways is the new

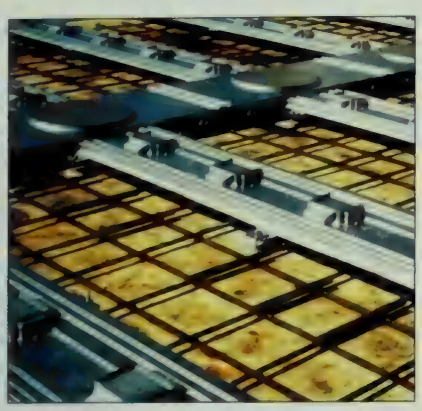
minimum bend radius standard for these cables:

1. 1.0" under no pull load.

2. 2.0" when subject to tensile loading up to the rat limit.

Not all wire and cable management systems offer 2.0" bend radius. Since no one can be certain that t initial installation or any future changes will n require cable pulling, the installation and maintenan of cables may be severely limited by a pathway th does not maintain the bend radius that is requir suitable for pulling fiber optic cable.





HIGH-CAPACITY INFLOOR SYSTEM

When the Wyndham Anatole Hotel in Dallas expanded its exhibition space, a primary concern was increased electrical and data/communications demands of trade show booths that utilize interactive displays and internet connections. Cellular duct were laid out 30 feet apart to conform to the typical trade show floor plan where 10-foot-deep booths are placed back to back facing ten foot aisles. A high-capacity trench system was selected to feed the cellular system. And extra-large floor boxes accommodate multiple receptacles and data/communications jacks.



POKE-THRU DEVICES IN NEW CORPORATE HEADQUARTERS

The headquarters of Clayton Homes in Alcoa, Tenn., is a completely open environment with no enclosed offices at all. The owner needed the flexibility to provide power, voice, and data cabling to modular furniture in a way that doesn't detract from the appearance. The solution was high-capacity poke-thru devices that accommodate high-speed UTP cabling. Ninety-one of the poke-thru devices are connected directly to modular office furniture.



FLEXIBLE SOLUTION FOR BANK BUILDINGS

Three new buildings on the corporate campus of First Union Corporation in Charlotte, N. C., had to be up and running quickly in order to maintain quality customer service. To speed installation and maintain flexibility, designers specified raised floors with a manufactured wiring system. The flexible connection between the distribution boxes and the raised floor boxes allows the Customer Information Center to change and expand.

PROFILE: THE WIREMOLD COMPANY

The Wiremold Company, headquartered in West Hartford, Conn., is a leading manufacturer of wire and cable management systems, power and data quality products, and data/communications connectivity systems.

Rapidly evolving data/communications technology and the need for flexible workstations have increased the amount and complexity of wiring and cabling. At the same time, building owners demand improved aesthetics and lower life cycle costs. The Wiremold Company anticipated these changes and introduced the concept of integrated wire and cable management systems. Leading product lines include Walker" infloor systems, SpecMate' cable tray, the Interlink Cabling System, the Activate' Connectivity System, Wiremold" perimeter raceway systems, and Sentrex" power and data quality products.

The Wiremold Company has embarked upon an aggressive program of product development that focuses on customer needs. A top priority is to extend future-ready enhancements, such as bend radius support, across a broad range of wire and cable management systems.

The Wiremold Company has expanded its global sales, support, and manufacturing capabilities. Its strategically located staff is "on the ground" with a thorough understanding of construction techniques and local codes. Value-added services include product testing and securing appropriate country approvals, design engineering support, and on-site project coordination.

LEARNING OBJECTIVES:

- Explain how wire and cable systems can lend flexiblity to an interior environment.
- Describe the different considerations in selecting a system.
- Describe variations of infloor duct systems.

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Then turn the page upside down and check your answers. Fill out the self report form on page 266 and submit it or use the Continuing Education self report form on Record's web site - -www.architecturalrecord.com - to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS:

1. Where do you begin when selecting the location and capacity for an infloor wire and cable system?

2. Why would you divide the areas to be wired into zones?

3. What are the advantages of poke-thru devices?

4. When are raised floor systems the most cost-effective solution?

5. What areas are infloor wire and cable systems most effective for?

6. What is the bend radius to allow for in fiber-to-desk cable applications?

ANSWERS:

1. Because the requirements of the workstation are of utmost importance, the location and capacity are dictated by the needs of the workstation.

2. Dividing the area in zones can reduce wire congestion. It reduces the size of the feeder run by lowering the number of workstations it will be required to feed.

3. Poke-thru devices can be installed in core-drilled holes in the concrete floor, not constrained by partitions or a grid. They can be placed where they are needed and they can be added to an existing system. Their initial installation cost is low and their only limitations are that they need plenum space and the drilled hole must avoid structural components.

4. Raised floor systems are most cost-effective when the highest levels of capacity and flexibility are required. They provide convenient access to power and data/communications outlets in raised floor boxes. Manufactured wiring systems connect raised floor boxes by modular cable assemblies which allow relocation by unplugging the cable set, moving the box, and plugging the cable set back in.

5. Large open areas such as retail stores, schools, and offices with modular partitions are the most effectively served by infloor wire and cable management systems

6. When optical fiber cable is being used horizontally, the cable management system needs to offer a two inch bend radius. Recently TIA/EIA and ANSI standards have established a minimum one inch radius bend when there is no pull load, and a minimum two inch bend radius when there is a tensile load. However it is best to design for the two inch bend since cable pulling may be required at some time during the life of the system.

WIREMOLD®
60 WOODLAWN STREET, WEST HARTFORD, CT 06110
TEL: 800-621-0049 FAX: 860-232-2062 WEB SITE: WWW.WIREMOLD.COM
CIRCLE 69 ON INQUIRY CARD

Advertising Supplement Provided by The Wiremold Company

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION SERIES

SITE / ROADWAY
Optical Systems
DESIGN AND APPLICATION GUIDE

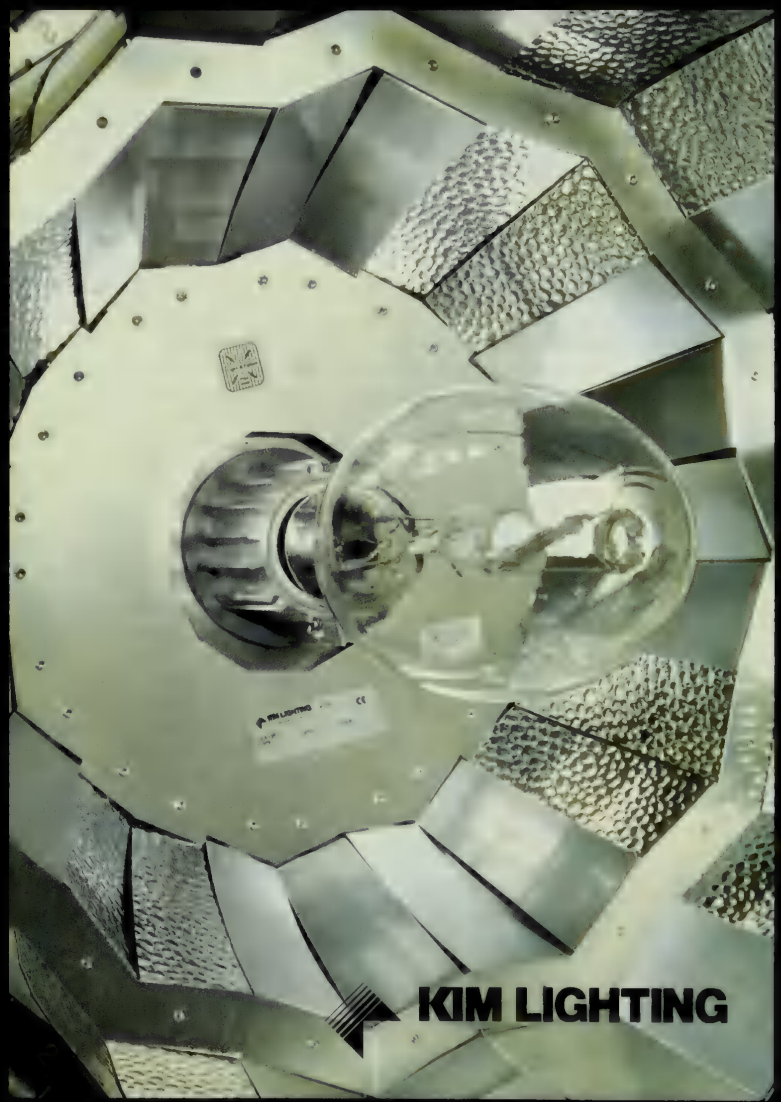
AIA/ARCHITECTURAL RECORD
Continuing Education

Use the learning objectives below to focus your study as you read **Site / Roadway - Optical Systems - Design and Application Guide**.
To earn two AIA/CES Learning Units including one hour of health safety welfare credit, answer the questions on page **192S** and follow the reporting instructions on page **266**. Or use the Continuing Education self report form on *www.architecturalrecord.com.*

Learning Objectives:

After reading **Site / Roadway - Optical Systems - Design and Application Guide** you will be able to:

- Identify the lighting requirements in each area of site lighting.
- Describe different methods to direct light toward or away from areas not to be illuminated.
- Describe the distribution types of luminaires and how they are best suited for lighting outdoor environments.
- Explain how isofootcandle plots are used to design site lighting.



Advertising Supplement Provided by Kim Lighting

Site Integration

Design, Focused on Applied Performance

Conceptually, project sites can be classified into four basic areas; Roadways, Open Areas, Pedestrian Areas, and the Site Perimeter, each representing a unique set of lighting circumstances. Meeting the diverse needs of site illumination requires a wide range of solutions. Optical systems selection begins with identifying the specific illuminance requirements, combining a product's aesthetic design with relevant performance features, to achieve an integrated site lighting design.



Roadways

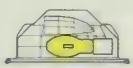
Roadways require narrow perpendicular and wide lateral beam spreads. This facilitates wide pole spacings, excellent uniformity, and control of glare.

Luminaire selection criteria includes performance, consideration of maintenance, lamp choices influenced by utility interests, and the ability to remain in service for long periods with minimal attention.

Optical designs must include an array of distributions in order to illuminate varied roadway widths, traffic patterns and to support traffic flow / organization.

Desirable Optical Features

Lamp Orientation



Horizontal Lamp
Flat Lens



Vertical Lamp
Convex Lens

Distribution Options



Type II



Type III
Asymmetric

Cutoff Control



Open Areas

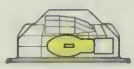
Open Areas require careful consideration of illuminance requirements, uniformity, and brightness control.

These areas are subject to scrutiny relevant to the safety and security of site occupants and the interface between vehicle and pedestrian traffic. Parking areas and connecting walkways are a potential source of litigation and liability for the project owner, requiring accurate prediction of illumination levels and dependable performance.

Illumination levels, uniformity, and glare must also be controlled to optimize visibility. Maximized luminaire spacings produce an economical installation.

Desirable Optical Features

Lamp Orientation



Horizontal Lamp
Flat Lens



Vertical Lamp
Convex Lens

Distribution Options



Type II



Type III
Asymmetric



Type V
Symmetric

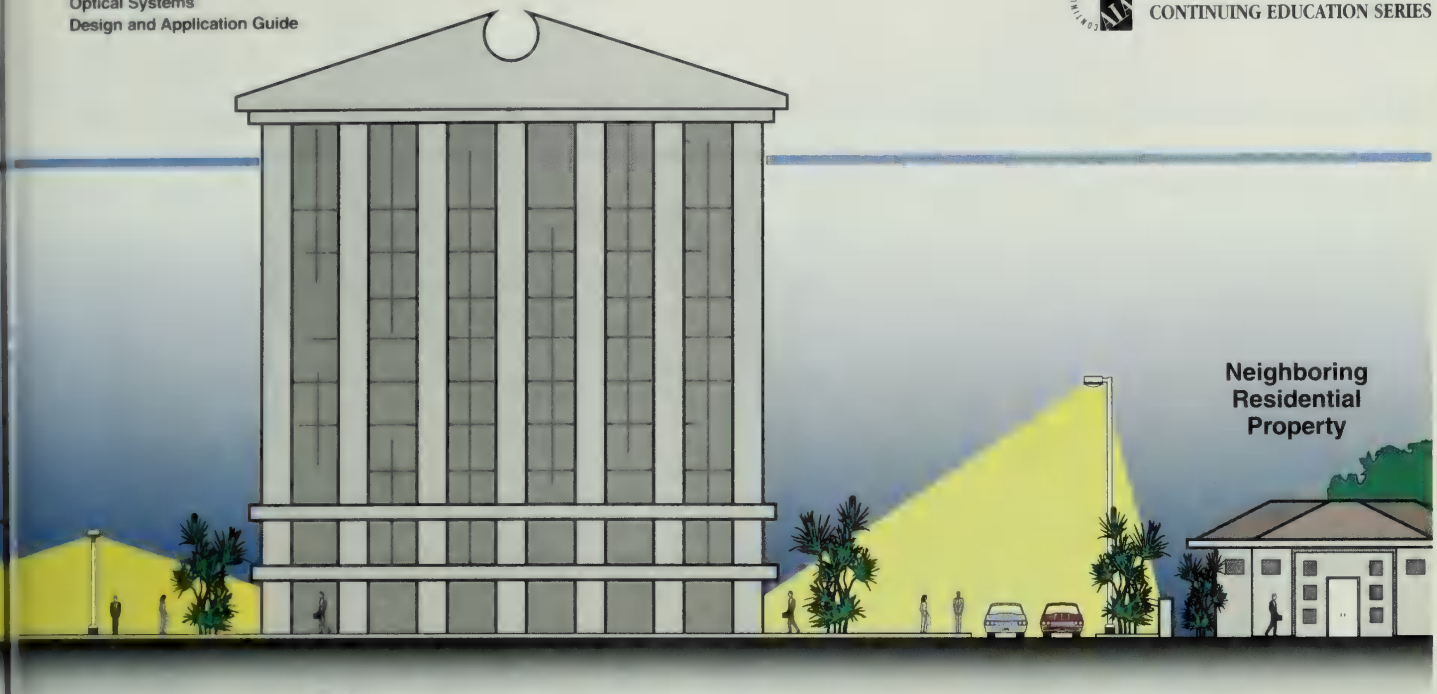
Rotatable Optics



Cutoff Control



Advertising Supplement Provided by Kim Lighting



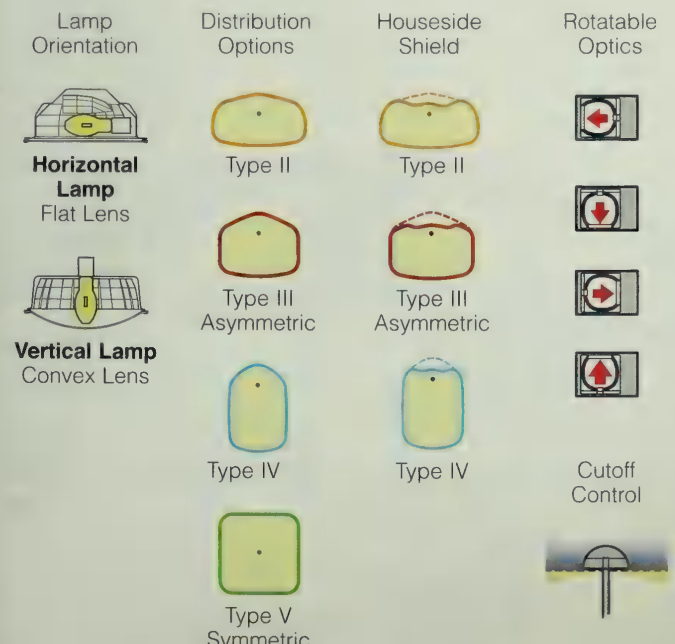
Pedestrian Areas

The transition between the surrounding site and the building itself defines the Pedestrian Area. Plazas, Courtyards, and Pathways require the widest range of optical solutions. These areas combine the concerns of Open Areas, with a heightened concern for integration of luminaire appearance with site architecture.

Illumination of irregularly shaped spaces, and a need to control stray light, requires optical diversity. Fixture placement may also be influenced by aesthetic concerns.

Luminaires in this area are highly visible, requiring attention to finish quality and detail. Design components shared with other area luminaires enhance integration of the entire site.

Desirable Optical Features



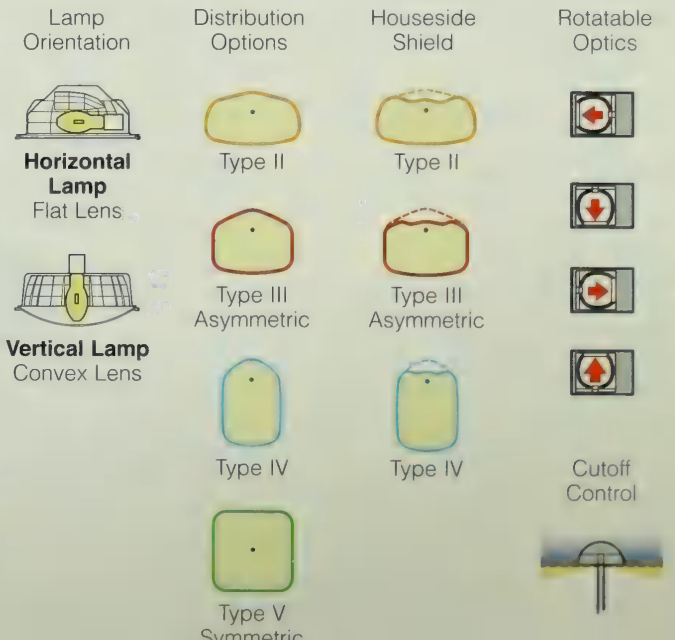
Site Perimeter

The Site Perimeter may include requirements to control illumination onto adjacent properties.

Light trespass ordinances, and courtesy to neighboring property occupants, require tight control of light emitted behind the luminaire.

Efficient design satisfies some of this demand, while cutoff optics provide an additional level of control. Houseside shields may also be required to provide even tighter control by trimming the distribution pattern. These concerns must be satisfied, without affecting overall system performance.

Desirable Optical Features

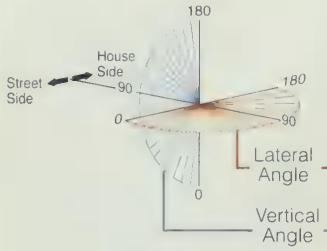


Advertising Supplement Provided by Kim Lighting

Photometry Information

Basic Language and Presentation

Luminaire Orientation



Candela Tabulation

Presenting the raw data used for all illuminance calculations, the information is tabulated with the Vertical Angles in rows and Lateral Angles in columns.

Lateral values from 0° to 90° are in front of the luminaire and referenced as "Street Side." Lateral values from 90° to 180° are behind the luminaire and referenced as "House Side."

Vertical values from 0° to 90° are below the fixture, while values 90° to 180° are at the fixture level and above.

Candela data is also used to define a luminaire's distribution type and cutoff characteristics.

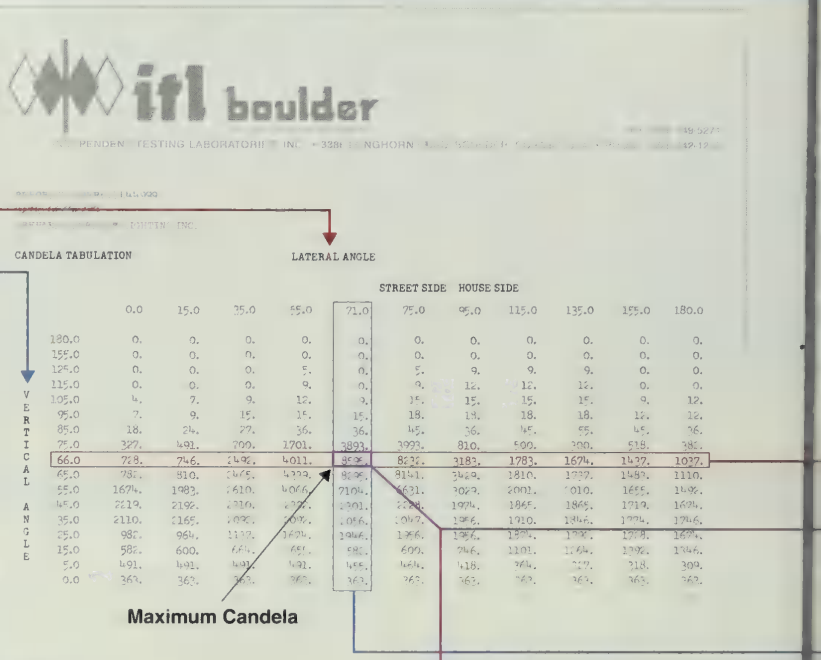


figure 4.1

Footcandle Calculations

The data provided in the candela tabulation is used to calculate footcandle levels within a proposed lighting design. Generally, this is accomplished by using computers to produce numeric calculations.

The evaluations are dependent upon the accuracy of the data used to make the requisite calculations.

Figure 4.2 illustrates the relationship of the calculated illumination at a single point, to the information provided in the Candela Tabulation. See figure 10.1 for the correlating location on an Isofootcandle Plot.

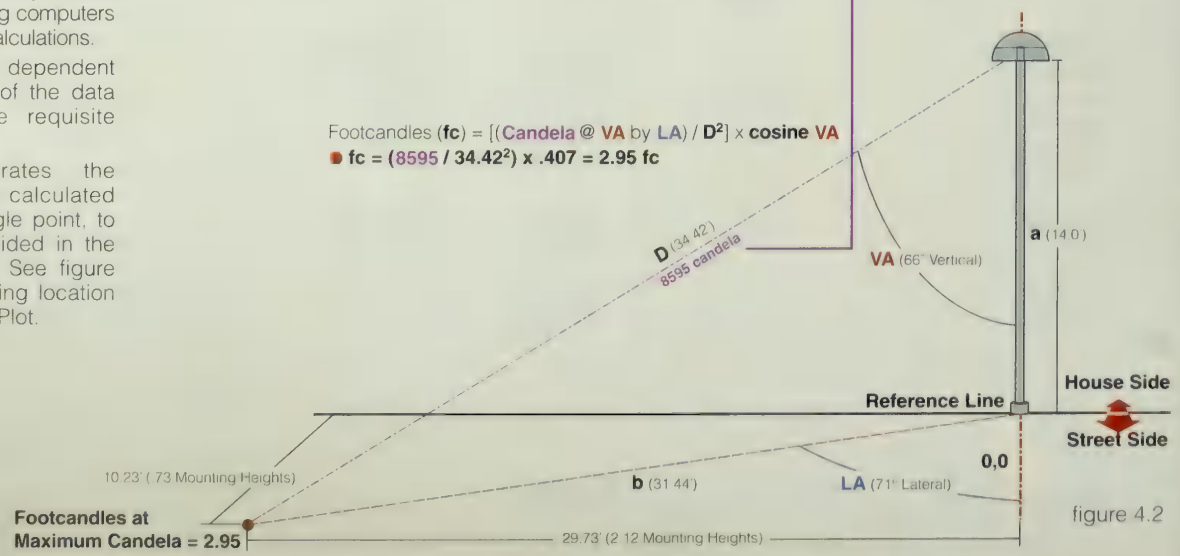


figure 4.2

Advertising Supplement Provided by Kim Lighting

Photometry is the foundation on which all evaluations of luminaire performance are built. Independent testing assures the photometry is accurate and reliable.

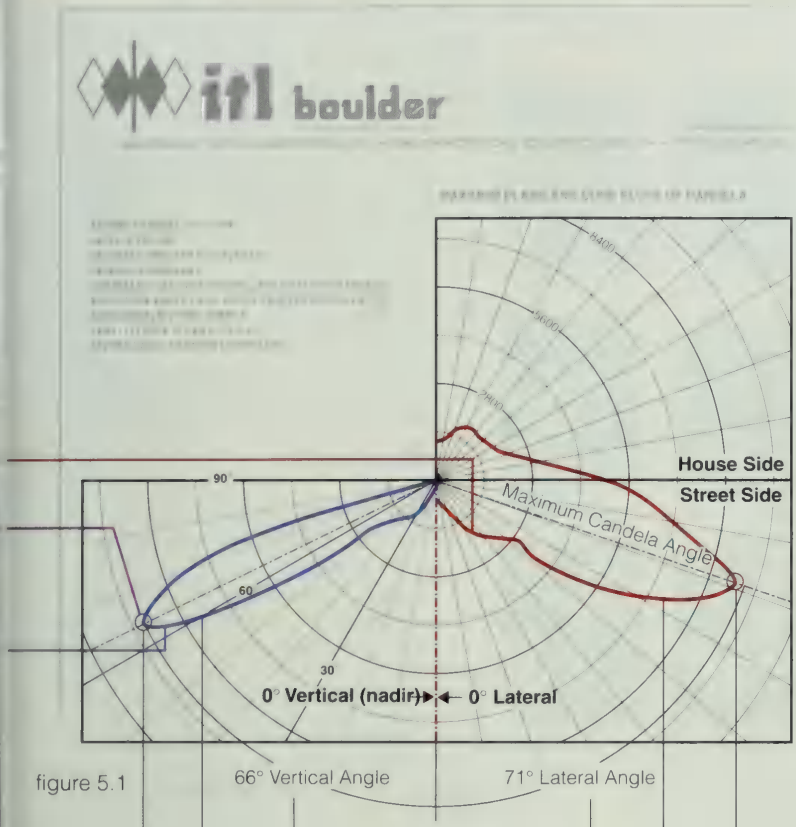


figure 5.1

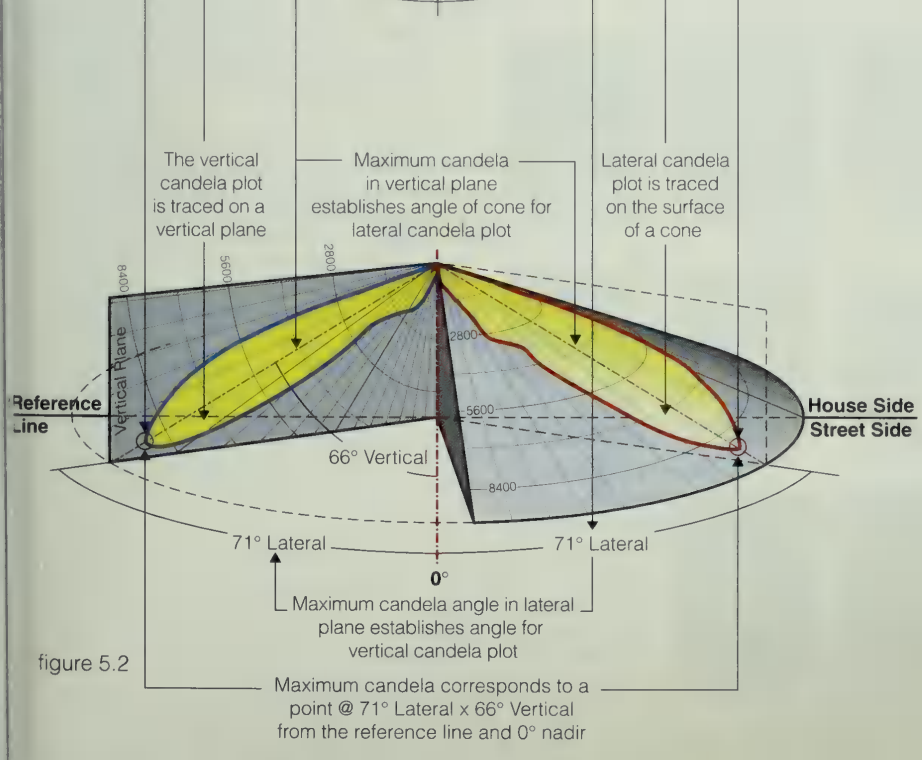


figure 5.2

Candela Plots

Candela Plots are based on the candela tabulation data (figure 4.1). Outdoor lighting produces unique light patterns, that are difficult to represent in a flat two-dimensional plane.

To create distribution plots that illustrate luminaire performance, curves are plotted with a three-dimensional dynamic.

Using the **maximum candela value** – in this example **8595** – two planes are identified; a lateral angle of **71°**, and a vertical angle of **66°** (see figure 5.1).

The vertical angle is used to create a cone, with its slope equal to the vertical angle of **maximum candela** – in this example **66°** – on this cone, all **lateral candela distribution values** from the tabulated data **row** at **66°** are plotted. The result is shown on the right side of the chart (figure 5.1). The two-dimensional view is looking down at the top of the constructed cone.

The second value – the **lateral angle** of **71°** – is used to construct a vertical plane off the lateral baseline. On this surface, all **vertical candela distribution values** from the tabulated data **column** at **71°** are plotted. The result is shown on the left side of the chart (figure 5.1). For purposes of presenting the plot, the vertical plane is flattened – or laid back 90° – to show it in the same plane as the right side plot.

The combination of the two curves represents luminaire performance in three dimensions.

Figure 5.2 (at left) shows the chart in a perspective view, to help visualize the relationship between the two plotted curves.

Photometry Testing — Variables Affecting Accurate Information

The Importance of Accuracy

Site / Area Illumination design is concerned with relatively large lamp sources, applied over large areas. Visual acuity is greatly influenced by control of glare and uniformity. In this, subtle variations in the performance of luminaires have a dramatic effect on the illuminated field. The only way to accurately predict the performance of a proposed design, is through the application of accurate performance data.

Comparing Performance

In addition to accurately predicting the performance of a single system, comparisons of performance between two systems, produced by disparate providers, can only be accomplished if the data provided by both is acquired using some form of mutually accepted standard. Ideally, this would include an independent source of testing, unbiased, utilizing industry established standards.

True comparisons of different optical systems can only be accomplished when the method of testing is the same for both systems.

Assumptions and Compromises

To save money, many manufacturers utilize methods that compromise accuracy under the assumption that small variances are not important. Just how far these assumptions are carried is never clearly defined and varies from one provider to another. This makes it very difficult to determine where actual test information and the compromises begin and end.

To make the most qualified, informed decisions, accuracy and dependability of information is vital. Compromises and assumptions have no place in the raw data being used to make selections.

Lamp Variations (images to scale with each other)

Metal Halide



70MH ED-17 | 175MH ED-17 | 175MH ED-28



250MH ED-28 | 400MH ED-28 | 400MH BT-37



1000MH BT-56 | Vertical Arc Tube | Horizontal Arc Tube

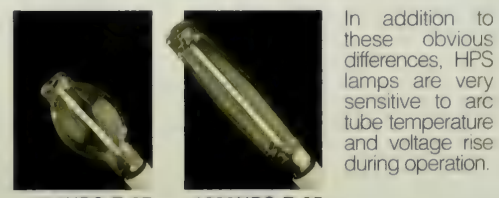
High Pressure Sodium



70HPS ED-17 | 100HPS ED-17 | 150HPS ED-17



150HPS ED-23 | 250HPS E-18 | 400HPS E-18



750HPS E-37 | 1000HPS E-25

In addition to these obvious differences, HPS lamps are very sensitive to arc tube temperature and voltage rise during operation.

figure 6.1

Prorating

Prorating is a common practice in the representation of luminaire performance. It is based on applying multipliers, based on raw lamp lumens, to a known test result. For example; A test accomplished on a system with a 10,000 lumen lamp, is pro-rated to represent a system using a 5,000 lumen lamp, by simply applying a .5 multiplier to the test data on the base luminaire.

This wrongly assumes that all other factors are exactly equal, that the only variation is raw lumens.

With High Intensity Discharge (H.I.D.) sources, every lamp is different, based on:

- Arc Tube Shape (Metal Halide or High Pressure Sodium)
- Arc Tube Size
- Envelope size (ED-17 through BT-56)
- Base Size (medium or mogul)
- Envelope shape
- Intended operating position (vertical, horizontal or universal)
- Position of the arc tube within the envelope
- Whether or not the socket design locks the lamp into a given position (pin orientation).

The combination of these elements produces unique configurations for virtually every H.I.D. lamp. Prorating cannot account for these variables.

The photos shown in figure 6.1, show the numerous variations in common H.I.D. lamps.

In addition to these variables, the position of the lamp within a reflector system, heat dissipation, internal reflection and lamp/optical system interaction are all variables not represented in prorated performance reports.

In the case of High Pressure Sodium lamps, heat plays a large part in lamp life. HPS lamp Voltage Rise at Arc Tube information is an indication of how the optical system controls arc tube heat. The higher the rise, the shorter a lamp's life will be. This is also not considered in prorated information, as it can only be gained through testing of each optical system.

Test Sources

Photometry testing can come from several sources. The two most common are the manufacturer or an Independent Test Facility. The two most recognized independent testing facilities are ITL of Boulder Colorado and ETL.

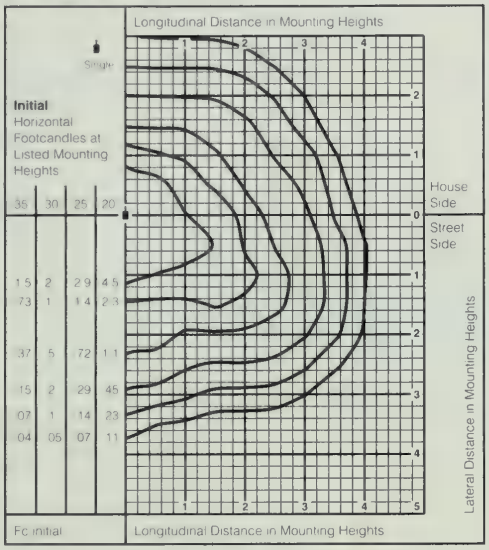
Manufacturers' data may or may not be trustworthy and must be carefully scrutinized. It is very difficult to determine whether the information provided by two different manufacturers can be accurately compared. Unless the testing procedures used by each producer are known, comparative results may be highly suspect. If the manufacturer has no other process in place to assure that every test is accomplished under strict procedural standards (such as ISO 9001), test results may not be accurate. Without strict control, testing process may shift, creating variations from one test to another over time.

Independent testing by ITL and ETL are accomplished using IES established standards, under strict procedural processes. In addition to this, independent labs utilize seasoned lamps of known output, driven by laboratory quality ballasts, whose electrical characteristics are tightly controlled. This produces results that are accurate from one optical system to another, regardless of when they are tested.

A Hybrid method, where a core series of optical systems are tested by an independent source, with additional tests accomplished by the manufacturer, can also be used. By providing a redundant series of bench-mark tests against the independent data, the accuracy of the manufacturers' information can be determined. This allows the manufacturer to test a larger range of systems which might be otherwise impractical.

In any case, it is important to know the origin of test data. If the source is suspect, so is the information provided.

400MH Type III



400HPS Type III

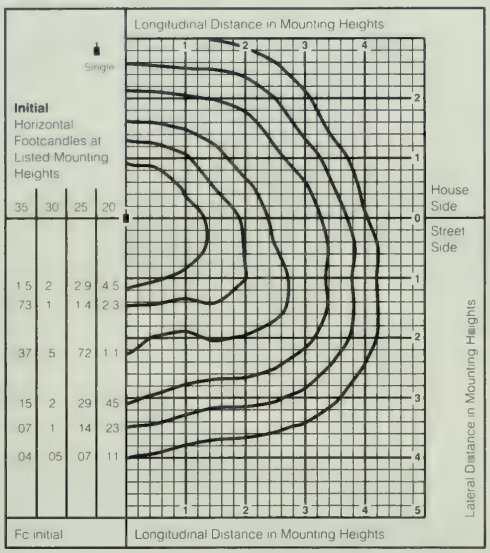


figure 7.1

Photometric Variations

The subtle variations in these two isofootcandle footprints are based on differences in lamp configuration only. All other components of the optical systems were identical.

Optical Variations

Optical systems are precise devices, that are affected by a wide range of variables. The effects of subtle variations from one lamp to another, an arc tube design, or the position of the lamp within a reflector system, can have a dramatic impact on performance. Any change in these variables requires testing to create accurate evaluation of performance. Figure 7.1 shows an example of how two reports vary, resulting from a change of lamp (MH to HPS).

Four Basic Rules

The following guidelines assure that the information used to evaluate and compare the performance of optical systems is the most accurate and dependable:

1. **Testing of every configuration**

 The only way to be assured that performance information is accurate is through testing. Each lamp/reflector combination must be tested. Prorating does not accurately represent actual performance.

2. **Known testing procedures**

 Testing and manufacturing should employ a quality program that is audited to **ISO 9001** standards. This assures that procedures are in place that control consistency in testing and manufacture.

3. **Independent verification**

 Independent testing and/or verification is the only way to assure that the data provided is accurate and does not include special "tuning" of performance to gain more attractive test results.

4. **Sealed optical systems**

 To assure the performance desired is achieved in application and will remain so without degradation from optical system contamination, the optical chamber must be tightly sealed.

Distribution Types

Definitions and Methodology

Method

Outdoor Luminaires produce lighting patterns that can be identified by their reach in front and to each side of a single fixture location. Distribution Types describe the reach of the luminaire's light pattern forward of each fixture, while Distribution Ranges define the reach to either side.

Distribution Types

Classification is based on locating the luminaire's effective major output pattern on a grid representing distances in Mounting Heights. The pattern is defined by tracing an area representing distribution at 50% of Maximum Candela. Classification is established by measuring where the bulk of this pattern falls on the grid (see figure 6.2).

In some cases, minor deviations in a beam pattern may cross the boundary from one pattern description into another. Where this has a nominal effect on applied performance, it should not be considered.[1]

Distribution Type defines how far forward of the luminaire (Street Side) the effective output reaches. Type II defines shallow reaches, while Type IV identifies luminaires with a definite forward-throw distribution. See the following diagrams for definitions of each specific type.

Distribution Range

Distribution Range defines how far the distribution pattern reaches laterally, perpendicular to the axis used to identify general Type. See the definitions below figure 6.2 for each of the ranges used.

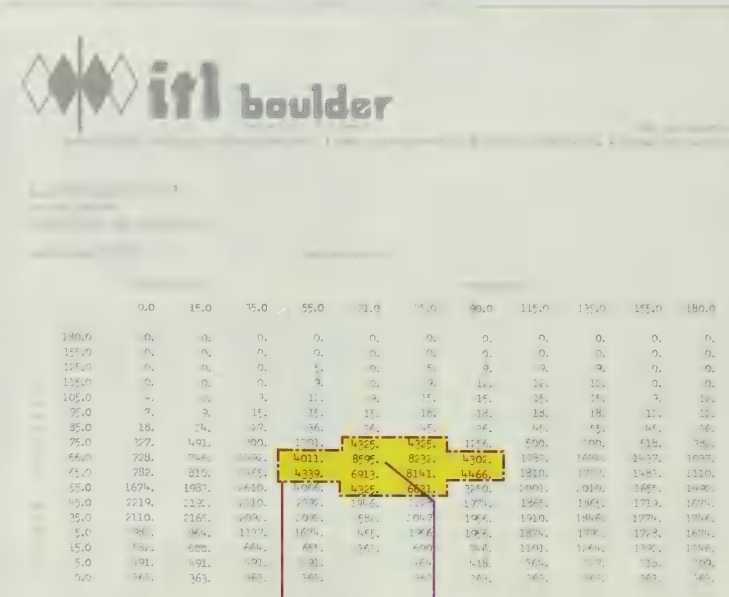


figure 6.1

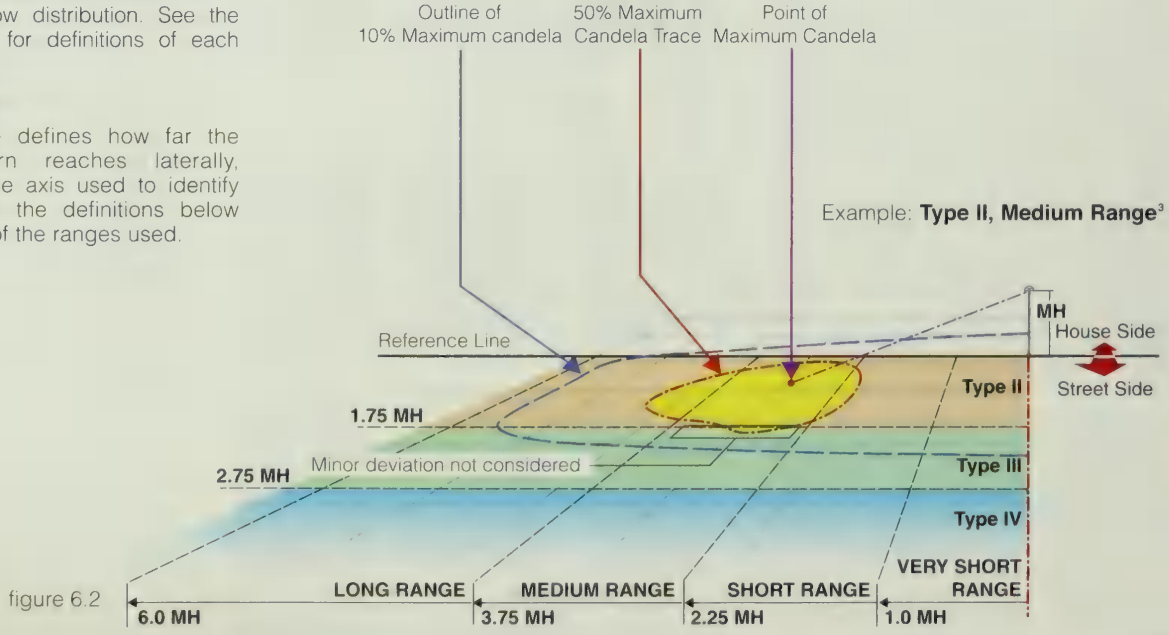


figure 6.2

Long Range

A distribution is identified as Long Range when the point of maximum candela lies from **3.75 to 6.0 MH** from the luminaire's centerline, along the reference line.

Medium Range

A distribution is identified as Medium Range when the point of maximum candela lies from **2.25 to 3.75 MH** from the luminaire's centerline, along the reference line.

Short Range

A distribution is identified as Short Range when the point of maximum candela lies from **1.0 to 2.25 MH** from the luminaire's centerline, along the reference line.

Very Short Range[2]

A distribution is identified as Very Short Range when the point of maximum candela lies from **0 to 1.0 MH** along the reference line.

Distribution Types only generally describe a distribution pattern. To establish the suitability of a luminaire for an application, evaluation must be completed using actual photometric data for the specific fixture and lamp combination being considered.

Example: **Type II, Medium Range**[3]



Type II
Horizontal Lamp

A distribution is classified as **Type II** when the **50% maximum candela trace lies within 1.75 MH** on the street side of the reference line.[4]

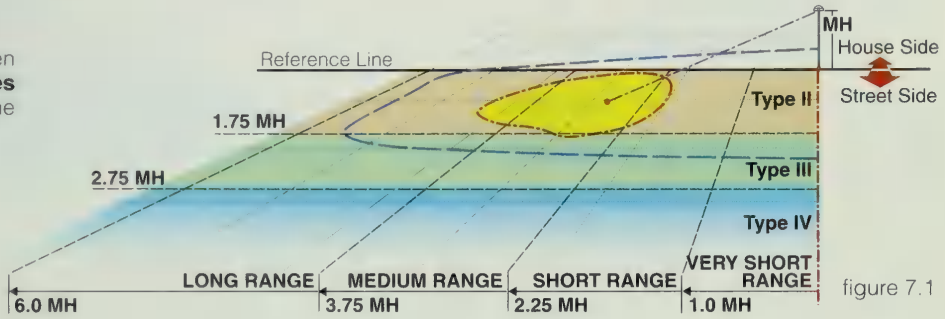


figure 7.1

Example: **Type III, Medium Range**[3]



Type III
Horizontal Lamp

A distribution is classified as **Type III** when the **50% maximum candela trace lies within 2.75 MH** on the street side of the reference line.[4]

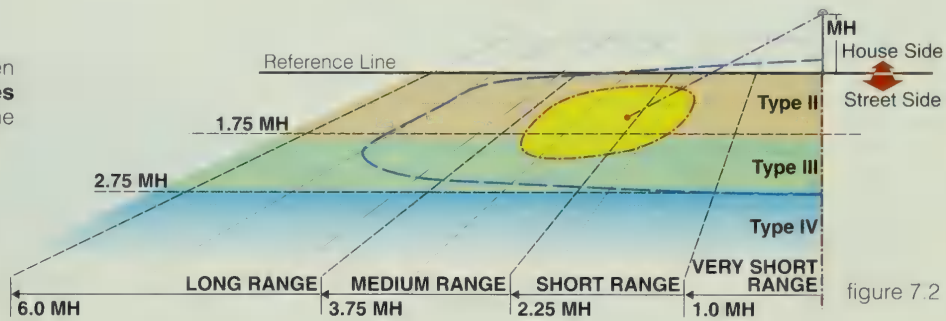


figure 7.2

Example: **Type IV, Short Range**[3]



Type IV
Horizontal Lamp

A distribution is classified as **Type IV** when the **50% maximum candela trace lies beyond 2.75 MH** on the street side of the reference line.[4]

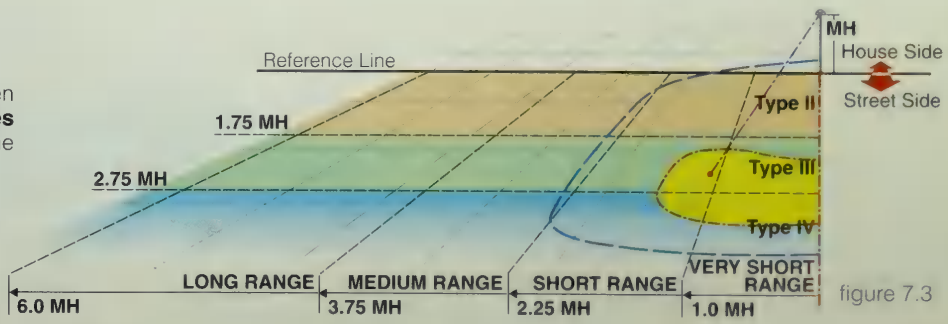


figure 7.3

Distribution Types

Definitions



Type V Square[5]
Horizontal Lamp

Distribution is classified as Type V Square for horizontal lamp luminaires when the **50% maximum candela trace is symmetric in four quadrants.** This distribution is characterized by four candela peaks, diagonal to the reference line.

Example: **Type V Square[3]**

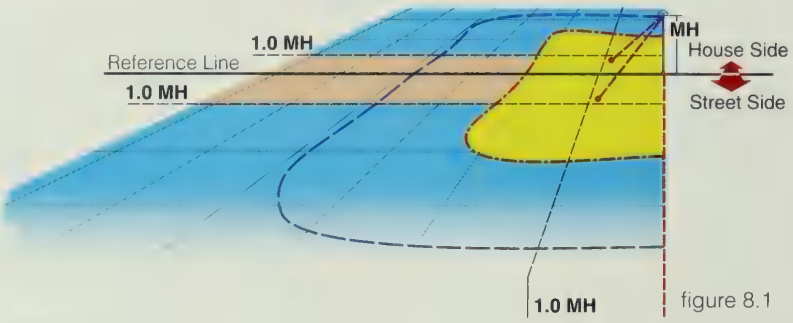


figure 8.1



Asymmetric[5,6]
Vertical Lamp

General pattern appearance is similar to Type III. Distribution is classified as Asymmetric for vertical lamp luminaires when the **50% maximum candela trace lies beyond 1.0 MH** on the street side of the reference line, and inside 1.0 MH on the house side of the reference line. **Narrow Range distribution** is identified when the **point of maximum candela** falls **inside of 2.25 MH, Wide Range** is identified when the **point of maximum candela falls beyond 2.25 MH.**

Example: **Asymmetric, Wide[3]**

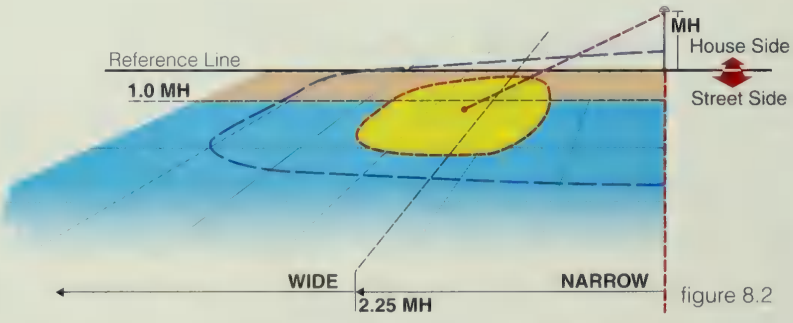


figure 8.2



Symmetric Square[5,6]
Vertical Lamp

General pattern appearance is similar to horizontal lamp Type V Square. Distribution is classified as Symmetric Square for vertical lamp luminaires when the **50% maximum candela trace is symmetric in four quadrants** on both street and house side of the reference line. **Narrow Range distribution** is identified when the **candela peaks** fall **inside of 2.25 MH along the reference line, Wide Range** is identified when the **candela peaks** fall **beyond 2.25 MH.**

Example: **Symmetric Square, Narrow[3]**

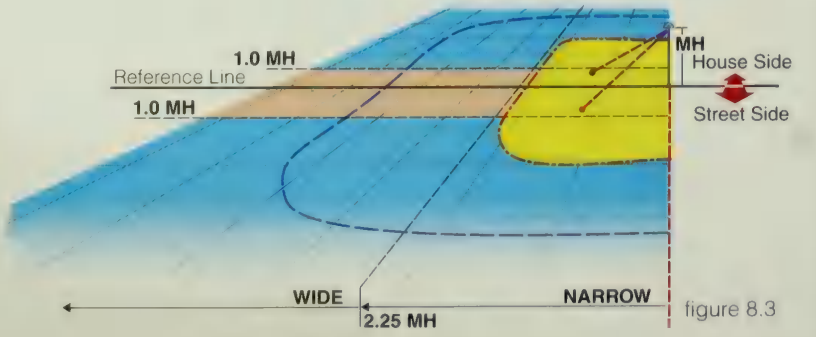
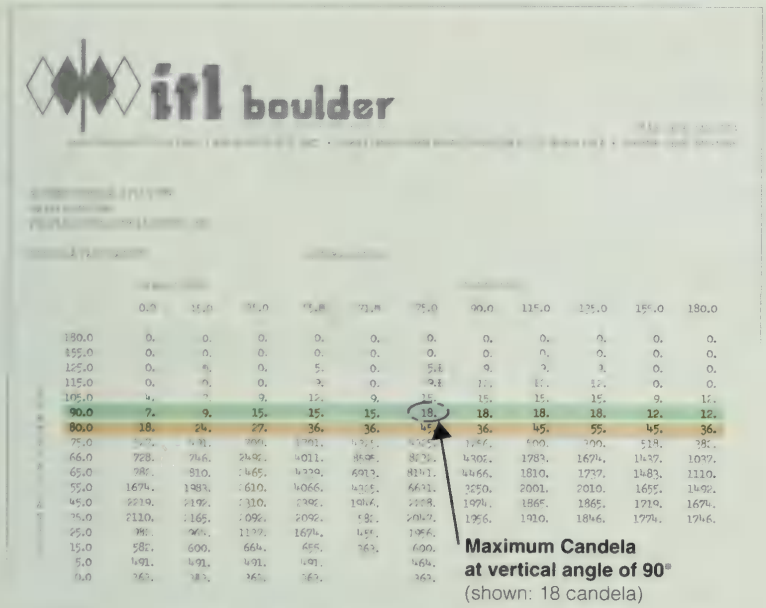


figure 8.3

Advertising Supplement Provided by Kim Lighting

Cutoff

Definitions and Methodology



Example Luminaire **Rated Lamp Lumens = 16000** figure 9.1

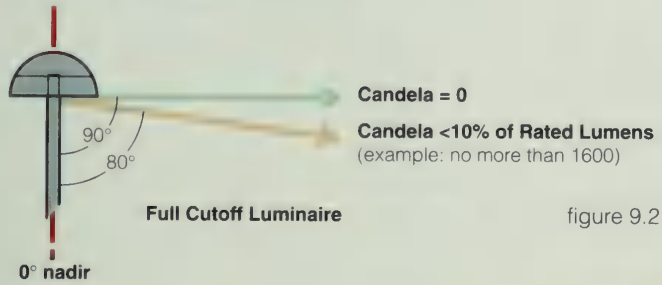


figure 9.2

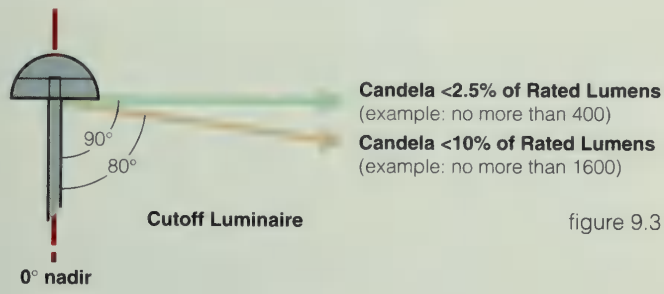


figure 9.3

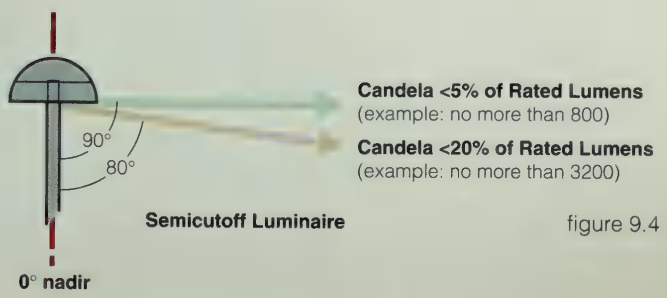


figure 9.4

What is Cutoff?

Beyond distribution and range, luminaires are defined by how well they control light at angles above 80° from nadir.

Designs without significant cutoff characteristics distribute light in zones unlikely to contribute to useful visibility, contribute to light pollution, and are inefficient.

Definitions

Definition of Cutoff is based on what proportion of a luminaire's output is being distributed at 80° and 90° above nadir.

NonCutoff

A luminaire's light distribution is designated as Noncutoff when there is no luminous limitation in any zone.

Full Cutoff

A luminaire's light distribution is designated as Full Cutoff when the candela at 90° above nadir is 0 and less than 10% of rated lumens at 80° above nadir.* See figure 9.2

Cutoff

A luminaire's light distribution is designated as Cutoff when the candela at 90° above nadir is less than 2.5% of rated lumens, and less than 10% of rated lumens at 80° above nadir.* See figure 9.3

Semicutoff

A luminaire's light distribution is designated as Semicutoff when the candela at 90° above nadir is less than 5% of rated lumens, and less than 20% of rated lumens at 80° above nadir.* See figure 9.4

Example:

The luminaire represented in the sample Candela Tabulation (figure 9.1) produces **18 candela at 90°** (<2.5% of Rated Lumens) and **55 candela at 80°** (<10% of Rated Lumens). These values fall within the defined ranges shown in figure 9.3, classifying this as a **Cutoff Luminaire**.

* Extracted from IES Publication RP33-99 (2/99)

Isofootcandle Plots

Conventions and Usage

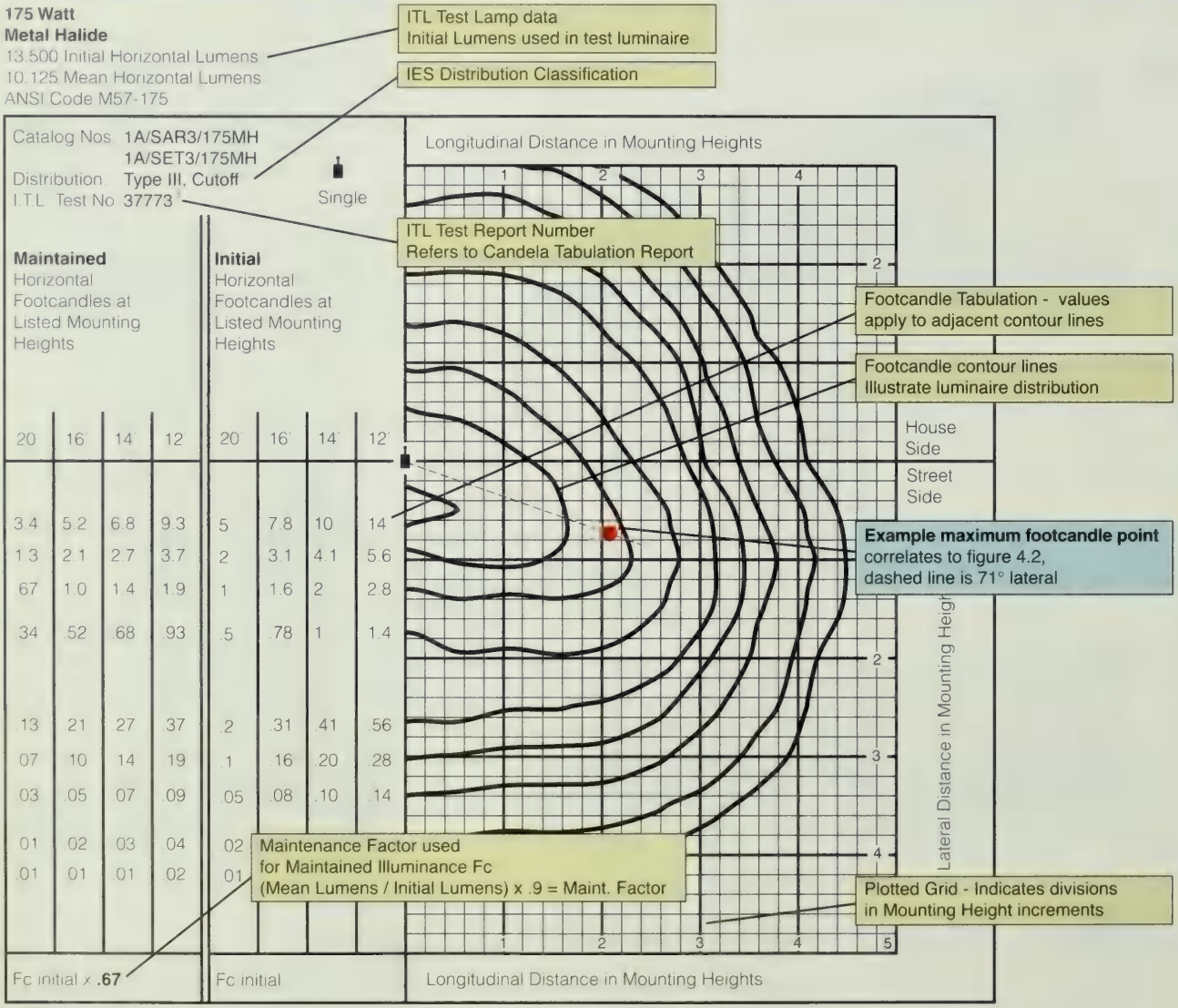


figure 10.1

Conventions

Footcandle calculations are shown with the luminaire at various mounting heights. Contour lines are drawn through illuminance values. Each contour, from the center out, represents approximately 50% of the value of the previous contour.

The plot is placed over a grid, indicating mounting height divisions, to demonstrate the luminaire's applied performance.

Usage

The isofootcandle plots graphically represent the luminaire's lighting pattern, in illuminance, striking a horizontal surface. These plots are scalable as they are represented in mounting height increments.

An approximation of pole spacings required to attain a desired uniformity can easily be determined from the information provided.

These plots also provide a productive tool for the comparison of various luminaires. The easily read visual reference indicates beam patterns graphically, where other information (such as candela tabulations and isocandela curves) may be less clear.

Example maximum candela point
and lateral angle line is included here to illustrate how illumination levels at a point correlate with the Isofootcandle Plot information shown.

The location of the point is 2.12 Mounting Heights lateral to the fixture reference line and .73 Mounting Heights from the Street Side.

The point represents a calculated 2.95fc, which corresponds to its position between the 2fc and 4.1fc Isofootcandle contour lines (at a 14' Mounting Height).

Estimated Spacing and Uniformity

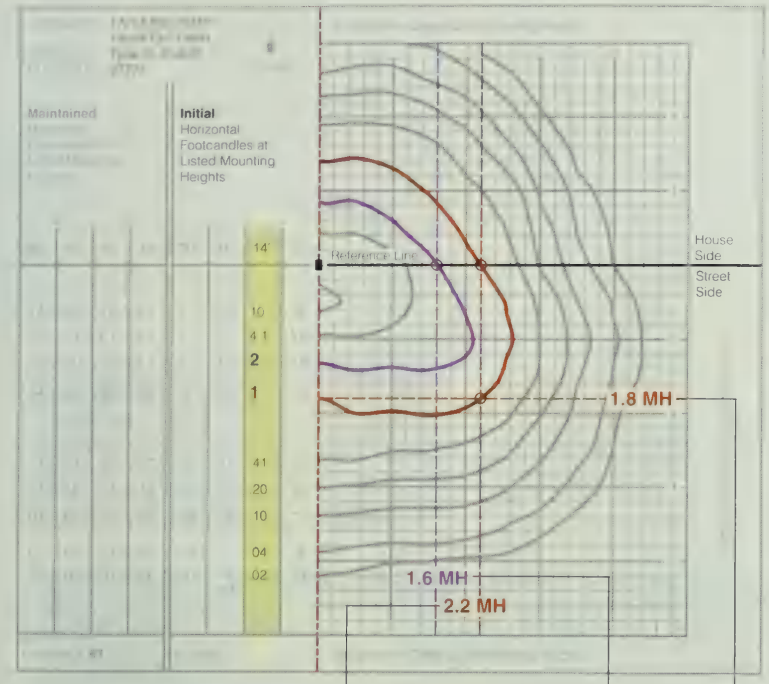


figure 11.1

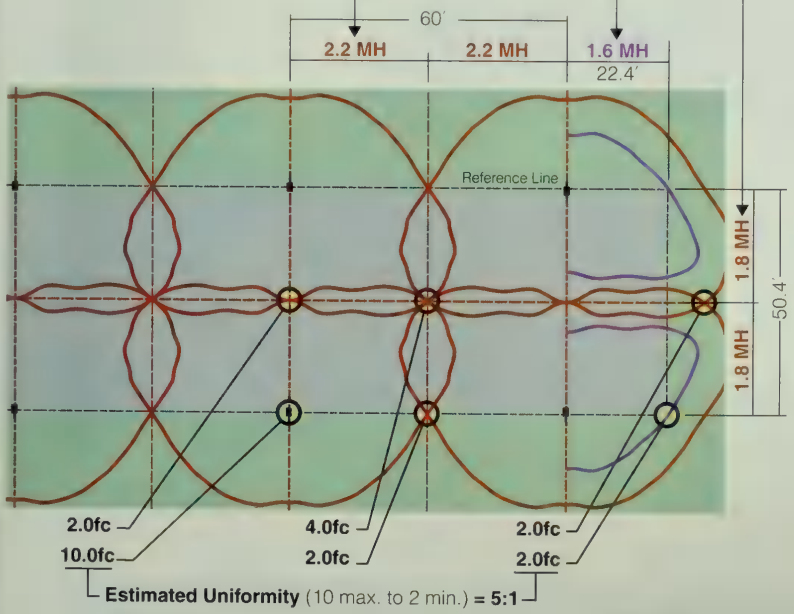


figure 11.2

Estimating Maximum Spacing

During the Schematic Design phase of a project, rough luminaire layouts can be created using isofootcandle plots.

EXAMPLE

This example assumes a desired **Minimum Initial Illuminance of 2.0fc,** using luminaires mounted on 14′ poles.

To estimate a fixture layout - start from the perimeter, where the **2.0fc** isofootcandle trace crosses the Reference Line, to establish the maximum single fixture distance to the site perimeter (**1.6 MH**, figure 11.1).

In order to attain the minimum illuminance (2.0fc) between fixtures, the 1.0fc traces of two fixtures must intersect at the site perimeter and interior. Therefore, lateral spacing is determined by where the 1.0fc trace intersects the Reference Line (**2.2 MH**), and maximum forward spacing is identified where the lateral spacing line intersects the 1.0fc trace on the street side of the luminaire (**1.8 MH**). These two dimensions indicate the mid-points between luminaires, in Mounting Heights.

Multiplying these **M**ounting **H**eight dimensions by the pole height (**14′**) defines the maximum luminaire spacings in both directions. In this example, **60′** (4.4 MH x 14′) x **50.4′** (3.6 MH x 14′).

Approximate Illuminances

By overlaying Isofootcandle Plots, a rough idea of illuminances can be accomplished by adding the values of each contour where they intersect (figure 11.2).

More accurate calculations (computer generated evaluations) will generally return levels higher than those achieved using this method, as smaller contributions from every adjacent luminaire would be included.

Approximate Uniformity

Through observation of the overlapping of the Isofootcandle Plots, approximate uniformity can also be estimated (figure 11.2).

Application

Distribution Pattern Uses

Estimating Maximum Spacing

Ideally, all light energy produced would be focused into desired "lighted" zones with no wasted energy being directed elsewhere. This would require an infinite array of distributions, with the ability to tune them to every site condition.

While this is not realistic, the combination of careful luminaire selection, mounting height, and luminaire placement, can produce very efficient designs, using just four basic distribution patterns.

For each of the basic distributions, variations such as range and the characteristics of horizontal vs. vertical lamp optics, produce additional choices. Further fine tuning can be attained with houseside shields and reflector orientation.

The example below (figure 14.1) shows how the combination of four basic distribution patterns are used to direct light energy into the lighted zones.



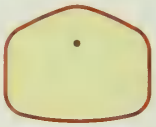
Type II

Type II distributions are well suited for narrow areas, running parallel to the luminaire's reference line, such as roadways, paths and driveways.



Type IV

Type IV distributions produce a deep forward throw, well suited for perimeter lighting.



Type III - Horizontal Lamp
Asymmetric - Vertical Lamp

Type III and Asymmetric distributions are well suited for site / area perimeters, wide roadways, and open areas.



Type V Square - Horizontal Lamp
Symmetric Square -Vertical Lamp

Type V and Symmetric distributions produce a wide, symmetrical pattern with excellent uniformity for large, open areas.

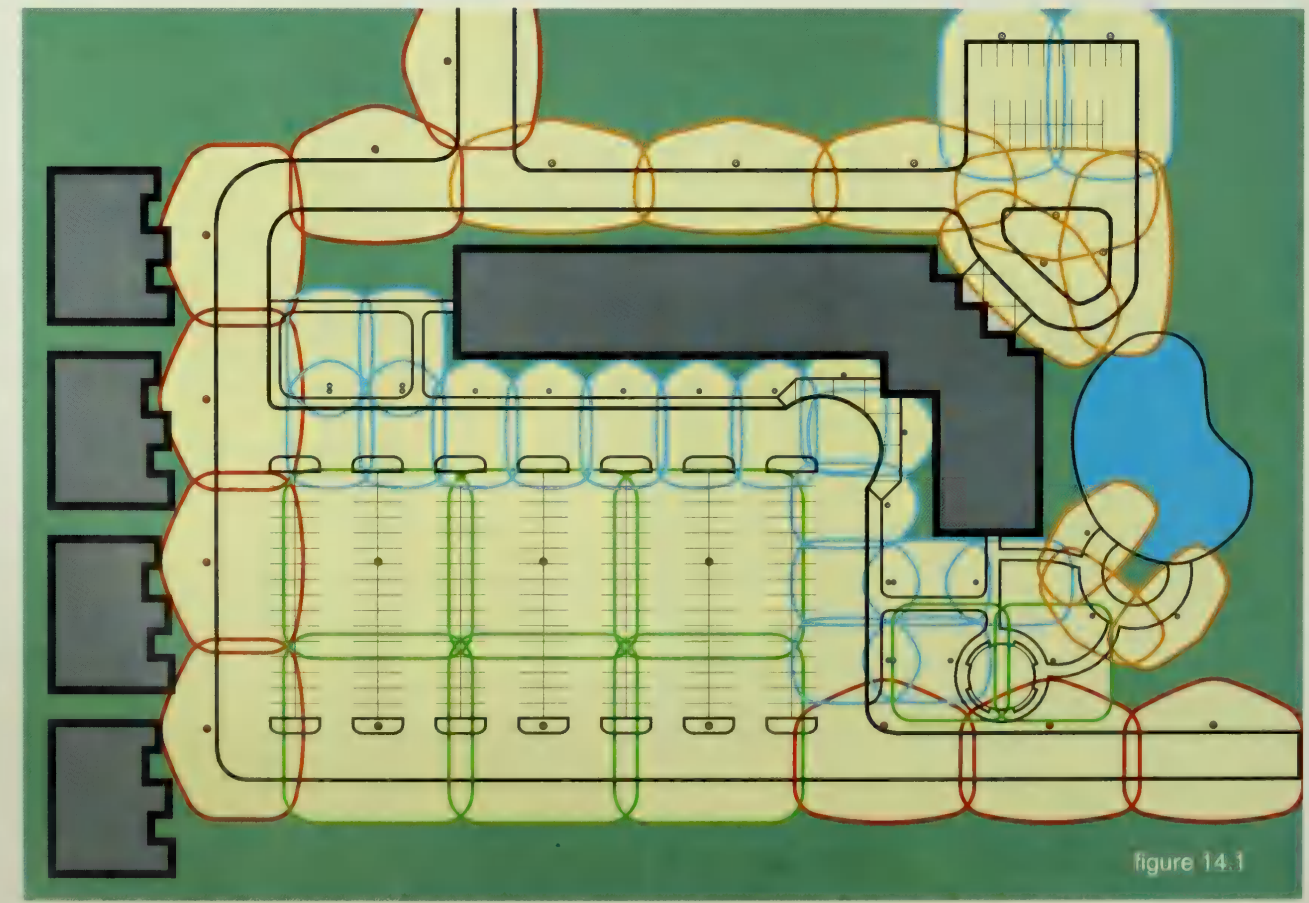


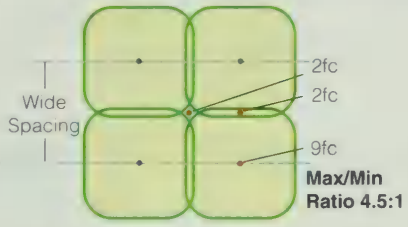
figure 14.1

Important Features for Fine-Tuning Designs



Typical Round Pattern Overlap

Poor diagonal overlap requires tighter pole spacing to maintain acceptable uniformity.

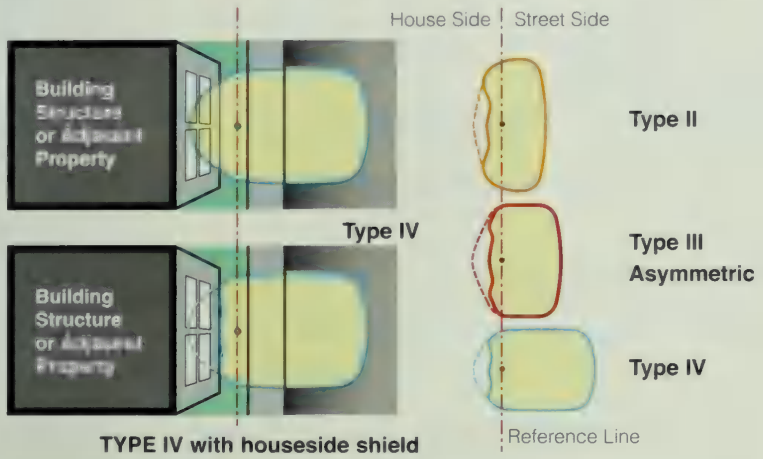


Type V Square Pattern Overlap

Improved diagonal overlap allows wider pole spacing while maintaining excellent uniformity.

Square vs. Round Distribution

For large areas, symmetric distributions provide maximum pole spacing in both lateral and longitudinal directions. Round distributions, however, do not reach well diagonally between pole locations, reducing uniformity and requiring shorter distances between luminaires. Kim square distribution patterns are specifically engineered to maximize pole spacing by improving uniformity diagonally between fixture locations.



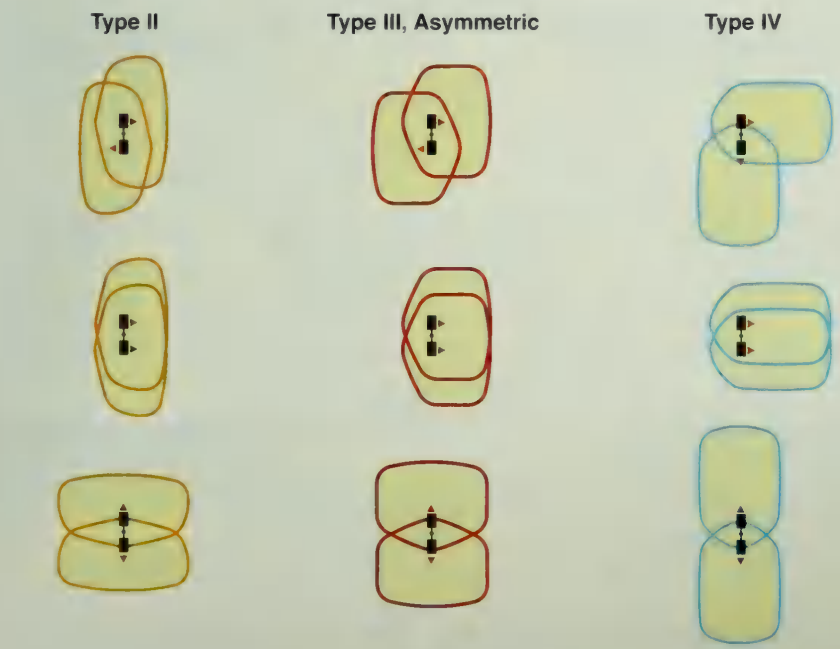
TYPE IV with houseside shield

Houseside Shields

When luminaires are located close to structures, or areas where the illumination emitted on the houseside of the reference line is objectionable, houseside shields offer additional control.

These devices "trim" light emitted by the lamp, as well as light reflected from within the optical system. These are applied to Type II, Type III and Type IV (horizontal lamp) and Asymmetric (vertical lamp) optical systems only.

Houseside shields are not applied to Type V or Symmetric optical systems, as they will not function properly.



Reflector Orientation / Rotatable Optics

Orientation of luminaires is often controlled by available pole locations and product aesthetic design. The luminaire head, arm or yoke may dictate an orientation that varies from the desired optical orientation.

The ability to rotate optical systems provides a high degree of flexibility to tailor luminaire performance to specific applications, while maintaining aesthetic continuity of the luminaires used.

The combination of optical distributions in multiple luminaire applications produces additional unique "footprints," creating customized performance and/or increased illumination levels to suit a very wide range of needs.

The illustrations shown at left are just a few examples based on a simple twin mounting arrangement.

Optical System Design

Lamp and Reflector System Integration

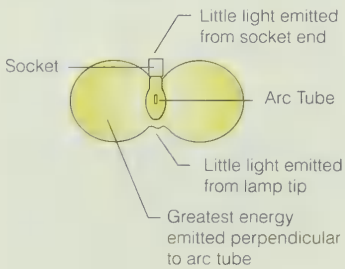
Optical Design

The function of an optical system is to direct light energy emitted by the lamp into desirable luminous zones. This can be accomplished by reflection, diffusion, baffling, refraction, or transmission through a lens.

Lamp placement also plays a significant role in determining optical system performance. Lamps placed higher in reflector systems produce narrower distributions with very sharp cutoff control, while lamps placed lower in reflector systems produce wider distributions with less precise cutoff.

Lamp Characteristics

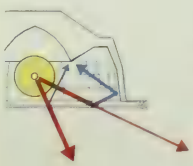
Clear envelope H.I.D. sources do not produce significant output from the lamp ends (socket and bulb tip). This characteristic has a significant impact on optical system design.



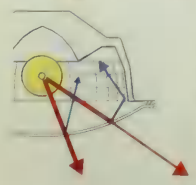
Lamp orientation and the design of reflector components use these characteristics to achieve the greatest end result.

Lens Effects

As light strikes the surface of a flat lens, some portion is reflected back into the optical system. This is most apparent at shallow incident angles and impacts the ability of an optical system to spread light horizontally.

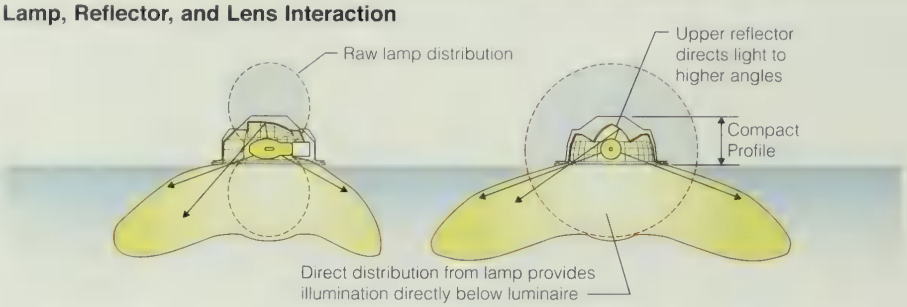


Flat lens surfaces can produce undesirable inter-reflections at shallow incident light angles.

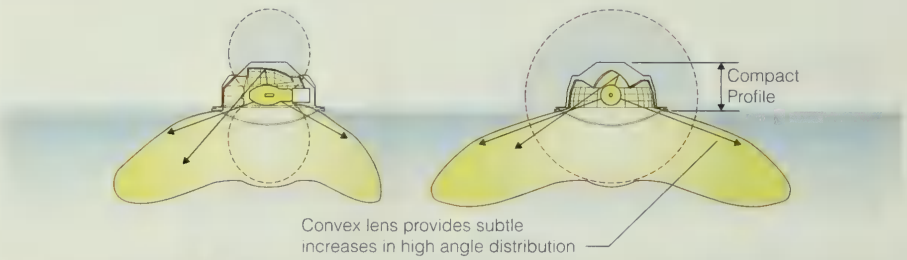


Convex lens reduces inter-reflections, improving luminaire efficiency at high distribution angles.

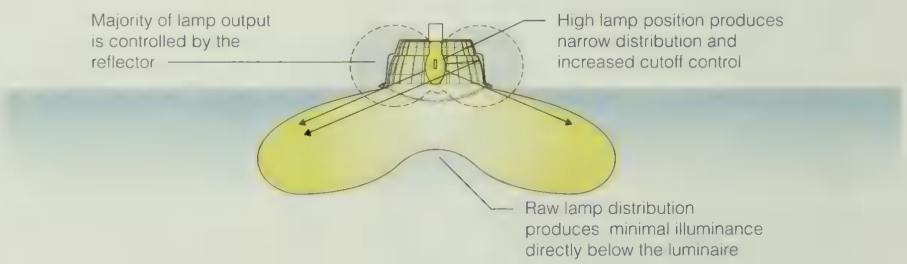
Lamp, Reflector, and Lens Interaction



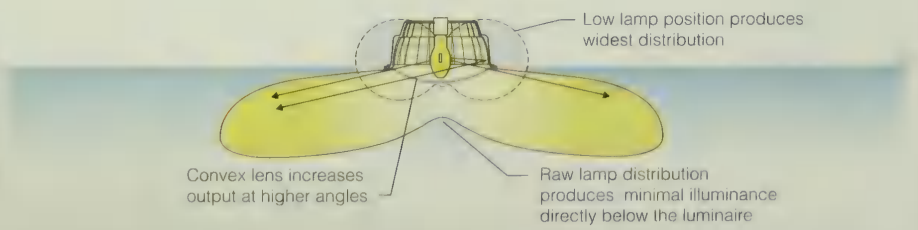
Horizontal Lamp with Flat Lens is well suited for asymmetric distributions with very sharp cutoff control.



Horizontal Lamp with Convex Lens is well suited for asymmetric distributions with good cutoff control, where increased lens presence is desirable. A subtle improvement in uniformity is also realized.



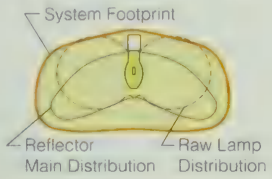
High Vertical Lamp Position with Convex Lens is well suited for narrow symmetric distributions with sharp cutoff control.



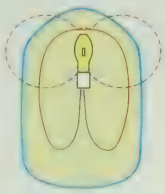
Low Vertical Lamp Position with Convex Lens is well suited for wide symmetric distributions.

Advertising Supplement Provided by Kim Lighting

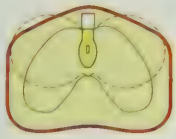
Design Considerations



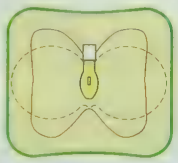
Type II - Horizontal Lamp



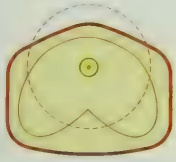
Type IV - Horizontal Lamp



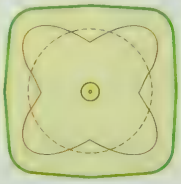
Type III - Horizontal Lamp



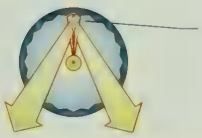
Type V Square - Horizontal Lamp



Asymmetric - Vertical Lamp



Symmetric Square - Vertical Lamp



Split-Beam Optical Design
Vertical lamp reflector design redirects light energy away from the arc tube center by "splitting" distribution using reflector facets.

Orientation

Using the lamp's natural distribution to its greatest advantage produces the most effective optical designs. In plan view, the horizontal lamp orientation produces asymmetric lateral distribution, while vertical lamp orientation produces a strong symmetric pattern. Reflector designs that enhance these characteristics produce the most efficient results.

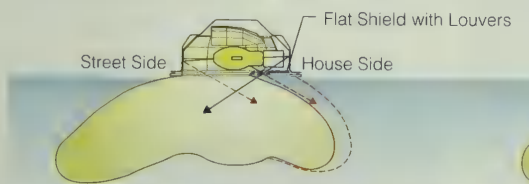
Horizontal Lamp Orientation

Horizontal lamp orientation provides the greatest control over lateral distribution. The normal lamp distribution is very well suited for asymmetric as well as square symmetric distribution. Horizontal lamp orientation produces relatively small arc tube exposure to high distribution angles. This produces a superior cutoff characteristic.

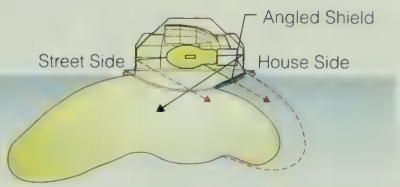
Vertical Lamp Orientation

Vertical lamp orientation subjects the greatest portion of the lamp's output to control by the reflector system, producing optimum vertical distribution control. This orientation provides less control over lateral output, favoring symmetric distribution patterns. Vertical lamp orientation also takes advantage of the higher lumen output produced by a vertical arc tube positioning.

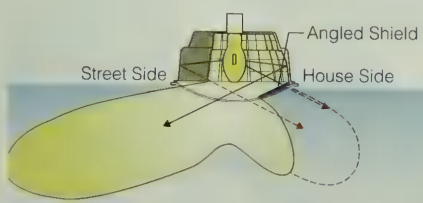
Split-Beam optical features produce the optimum optical system performance by reducing energy being redirected through the arc tube and lamp envelope. This also reduces damaging arc tube voltage rise in High Pressure Sodium sources.



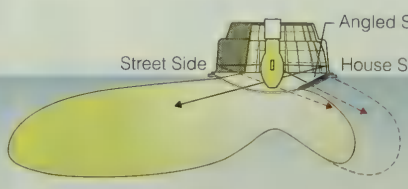
Horizontal Lamp with Flat Lens: Least effective shielding



Horizontal Lamp with Convex Lens: Effective shielding



High Vertical Lamp Position with Convex Lens: Most effective shielding



Low Vertical Lamp Position with Convex Lens: Very effective shielding

Houseside Shields

The effects of lamp orientation and lens configuration on houseside shields are dramatic.

Main reflector distribution, street-side reflector brightness, and direct lamp visibility are factors that determine the effectiveness of houseside shields in reducing unwanted brightness on the house-side of the optical system.

Horizontal lamp orientation presents the greatest challenge in designing effective shielding. Convex lenses allow more effective control, as the shielding device is able to better control direct arc tube brightness. Vertical lamp orientation provides even greater control, as the arc tube is already deeper in the optical system.

Advertising Supplement Provided by Kim Lighting

Reflector Mechanical Design

General Methods of Construction

Reflector Construction

Reflectors can be constructed using several methods: hydroforming, stamping, spinning, segmented strips and fabrication. The greatest difference between methods lies in how the reflective surfaces are finished and how precise the reflector elements are shaped and held in place.

Hydroforming, stamping, and spinning begin from raw, unfinished sheet metal, which is formed, then finished in one piece. The material used in these methods often compromises reflectivity to accommodate forming and finishing of the component. The shape of the reflector segments, corner radii and surface texture are also affected by these forms of manufacture, at the cost of performance.

Pre-finished optical reflector sheet offers much higher reflectivity than any post-form finishing. The variety of reflective qualities and surface textures produces the greatest level of design control. These materials are alloyed to improve reflective qualities and are finished to very tight tolerances, using computer controlled machine processes. The pre-finished surface, however, cannot be hydroformed, spun or stamped, as this destroys the reflective qualities and durability of the material.

Reflectors made from pre-finished reflector materials must be carefully formed and fastened to create an optical assembly.

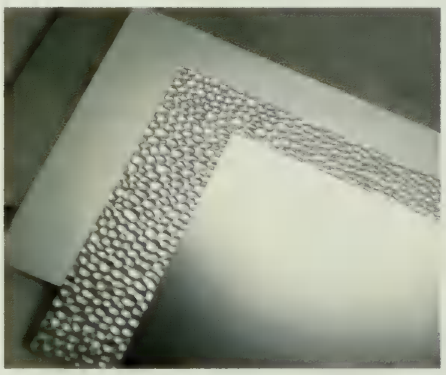
Footnotes:

1. ITL Reports using IES guidelines consider any crossing of the identified boundaries as definition of overall Type, regardless of its impact or significance to applied performance. Classifications indicated do not consider minor deviations in classification of Type shown.
2. The "Very Short Range" identification is not an IES standard definition, but is used by ITL to identify distributions with ranges inside the 1.0 MH allowed in the "Short Range" definition established.
3. Information shown is for illustrative purposes only and does not represent a specific luminaire's performance.
4. Definition is extracted from IES Lighting Handbook, 8th edition.
5. Definition has not been identified by the IES at this time. Definition shown is based on Kim Lighting research and development efforts and engineering of optical systems to improve applied performance.
6. Distribution may be classified by ITL, using IES standard practices, as a Type IV distribution, due to a small portion of the 50% isocandela trace falling beyond the 2.75 MH line. This aberration in classification methodology conflicts with luminaire applied performance. Classification indicated more accurately represents actual luminaire usage.



Hydroforming, Stamping, or Spinning

Reflectors created with these forming methods require the addition of draft-angles for tool release and large corner radii. These requirements often result in a compromise to optical design. Final finishing of these components may suffer unevenness in corners and bends. While producing consistent shape and allowing easy sealing of the optical chamber, these forming methods do not offer the precision of pre-finished lighting sheet. These forming methods are well suited to small scale optical systems, where compact design is more critical than optimum output.



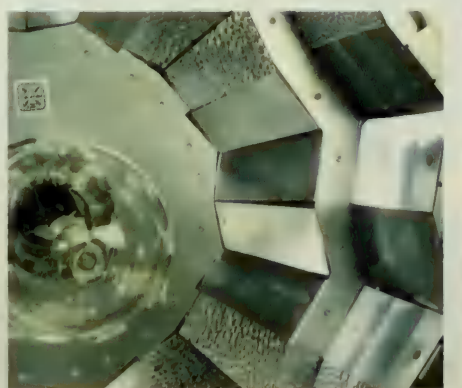
Pre-finished Lighting Sheet

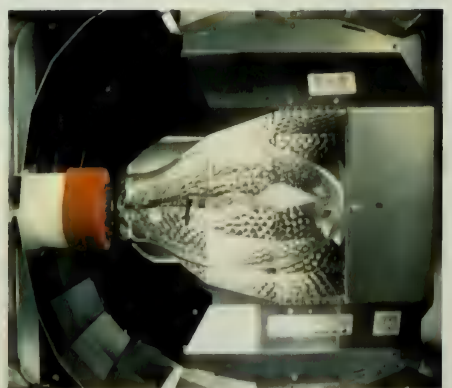
Pre-finished optical sheet materials offer the most precise surface finish, optical quality, surface durability and consistency. These materials are alloyed and finished specifically to produce the reflective qualities. Reflectivity can be as high as 98%, with optical clarity near that of scientific first-surface mirrors. The availability of a wide range of finishes (specular to diffuse) and surface textures (flat to heavily dimpled), provides the opportunity to create very precise optical systems, not possible with other forming methods.



Fabricated Construction

Using a combination of pre-finished materials, formed, interlocked and riveted to a rigid frame, this method of construction creates a robust optical system. Each reflector element is held firmly and precisely in place. The three dimensional attributes of this design also increase efficiency by controlling a larger portion of lamp output. These systems are tough enough to be cleaned and will withstand years of regular maintenance with no degradation of performance or precision.





Advertising Supplement Provided by Kim Lighting

Learning Objectives:

After reading **Site / Roadway - Optical Systems - Design and Application Guide** you will be able to:

- Identify the lighting requirements in each area of site lighting.
- Describe different methods to direct light toward or away from areas not to be illuminated.
- Describe the distribution types of luminaires and how they are best suited for lighting outdoor environments.
- Explain how isofootcandle plots are used to design site ligthing.

Instructions:

Refer to the learning objectives above. Complete the questions below. Then turn the next page upside down and check your answers. Fill out the self report form (page 266) and submit it for use in the Continuing Education self report form on *Record's* web site, *www.architecturalrecord.com*, to receive two AIA/CES Learning Units including one hour of health safety welfare credit.

Questions:

1. What is the function of an optical system for site lighting?
2. Site lighting is classified into what four basic areas?
3. What are the requirements of each of the four areas of site lighting?
4. What do Distribution Types describe?
5. What does Distribution Range describe?
6. What is Cutoff?
7. How are reflectors used?
8. What is the difference between placing a lamp vertically or horizontally in a fixture?
9. What is the difference between a flat lens and a convex lens?
10. What variable factors affect the testing of H.I.D. lamps?
11. What are isofootcandle plots?
12. How are isofootcandle plots used to determine spacing of light poles?

FOR MORE INFORMATION CONTACT:

KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
(626) 968-5666
www.kimlighting.com

Answers:

1. The function of an optical system is to direct light energy emitted by the lamp into desirable luminous zones. Ideally, all light energy produced would be focused into desired lighted zones with no wasted energy being directed elsewhere.
2. Project sites are classified into four basic areas: roadways, open areas, pedestrian areas, and site perimeter.
3. Roadways require low maintenance lamps that will remain in service for long periods with excellent uniformity and glare control. Their light pattern should be narrow perpendicular, to not spill over the curb and wide lateral beam to facilitate wide pole spacings. Open areas require uniform illumination levels and glare control. Pedestrian areas require that design of the luminaires be aesthetically coordinated with the entire site and that stray light be controlled. Site perimeter requirements are to control illumination onto adjacent properties.
4. Distribution Types describe the light pattern reaching forward of the luminaire, or how far forward of the luminaire the effective output reaches. Type II defines shallow reaches, Type III defines moderate reaches, and Type IV identifies luminaires with a definite forward-throw distribution. Type V Square is symmetrical on all four sides.
5. Distribution Range defines how far the light reaches to either side of the luminaire. The ranges are categorized as very short, short, medium and long.
6. Cutoff describes the luminaire's output at 80 degrees and 90 degrees from perpendicular. Noncutoff describes no limitation of light. Full cutoff describes no light above 90 degrees. Cutoff is describes less than 2.5 % lumens at 90 degrees, and Semicutoff describes less than 5% lumens at 90 degrees.
7. Reflectors are designed to increase efficiency by controlling a large portion of lamp output. Lamps placed higher in reflector systems produce narrower distribution with very sharp cutoff control, while lamps placed lower produce wider distribution with less precise cutoff. Because H.I.D. lamp sources produce the most illumination perpendicular to the arc tube, lamp orientation and reflector components are used to achieve optimum results.
8. Placement of the lamp horizontally or vertically effects the pattern of light. Vertical lamp orientation produces the most vertical distribution control and produces higher lumen output. Horizontal lamp orientation provides the greatest control over lateral distribution with superior cutoff. Housside shields are most effective when used with lamps placed vertically, and especially if the lamps are placed high in the optical system.
9. Lenses can be either flat or convex. The flat lens reflects some light back into the optical system and impeeds the ability to spread light horizontally. Convex lenses reduce inter-reflections, improving luminaire efficiency.
10. Every H.I.D. lamp is different in arc tube shape, arc tube size, envelope size, base size, intended operating position, position of the arc tube within the envelope, and whether or not the socket design locks the lamp into a given position. The combination of these elements produces different configurations for each HID lamp which prorating cannot account for.
11. Isofootcandle plots graphically represent the luminaire's lighting pattern as it hits a horizontal surface. This plot demonstrates the fixture's applied performance. The plot is made by drawing contour lines of the footcandle calculations when the luminaire is placed at various mounting heights.
12. Spacing of light poles is determined by projecting isofootcandle plots. To maintain the minimum illuminance of 2.0 fc between fixtures, the 1.0 fc traces of two fixtures must intersect at the site perimeter and interior. Lateral spacing is determined by where the 1.0fc trace intersects the reference line. Forward spacing is identified where the lateral spacing line intersects the 1.0 fc trace on the street.

FOR MORE INFORMATION CONTACT:

KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
(626) 968-5666
www.kimlighting.com

the perks of membership

SBCCI

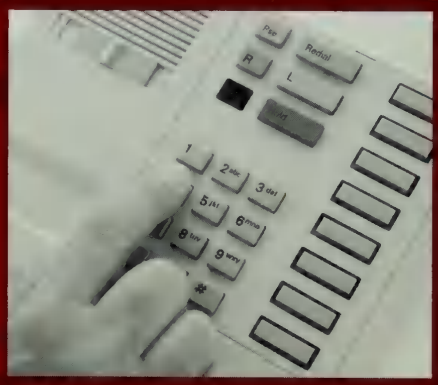
Lowest Pricing in the Industry

free code interpretations





toll free: 1 877 4 ICodes



http://www.sbcci.org



be part of the team.

CIRCLE 71 ON INQUIRY CARD

900 Montclair Road · Birmingham, AL 35213-1206 · 205-591-1853

There Was A Time
When You Could *Only* Build It In Your Head.



Freedom to create what you once only dreamed possible. Trex® Easy Care Decking®. No sealing. No splinters. No limits.



©2000 Trex Company, Inc. All rights reserved. TREX, the TREX logo, EASY CARE DECKING and THE DECK OF a LIFETIME are either federally registered trademarks, trademarks or trade dress of Trex Company Inc. Winchester, Virginia.



rex.com or call 1-800-BUY-TREX ext. 615 for your Trex® Specifier's Kit.

Trex®

The DECK of a Lifetime.

CIRCLE 72 ON INQUIRY CARD



Hedgpeth Architects
Santa Rosa, CA

It isn't every day you find something your left and right brain can agree upon.



Half the fun of being an architect is finding a balance between design and functionality. That's what makes Andersen® products so ideal. For the creative right side of your brain, there are over 200,000 shapes and sizes. Plus unique profiles, slender frames and clear pine interiors that can be painted or stained to complement each room. And for your more practical left side, the exclusive Perma-Shield® System of building, backing and servicing windows and doors helps ensure your designs will last. All things considered, who could argue with that? For more information, call 1-800-426-4261, ref.# 3186

Worryproof. Timeproof. Andersen Windows.®

CIRCLE 73 ON INQUIRY CARD

www.andersenwindows.com

Andersen AW Windows·Patio Doors

002581 Call 1-800-426-4261 for a copy of the Andersen 20/10-year warranty. "Andersen," the AW logo and "Perma-Shield" are registered trademarks of Andersen Corporation. ® 2000 All rights reserved.

RESIDENTIAL

The ultimate contextualism: Houses that are inseparable from their sites

The houses on the following pages are the ultimate in contextualism. They don't just interact with their surroundings but are in, of, and about their sites. In fact, these homes are so site-specific that it is impossible to imagine them anywhere else. They are buildings that do more than show respect for the land; they celebrate it.

Having long searched for a backyard for his son, Melbourne architect Sean Godsell left a hilly site virtually untouched when he designed a home for himself and his family. Native plants surround the house, blurring the distinction between inside and out.

Two houses in Connecticut, one by Gray Organschi Architecture and the other by G. Mackenzie Gordon, are inseparable from the land on which they are built. Lisa Gray and Alan Organschi seamlessly integrated a tennis court with a guest house. The subterranean house Mac Gordon designed for himself and his wife is both theoretical and practical. It tests some of the architect's theories on building underground while also providing natural insulation, preserving the landscape, and making the large house virtually invisible.

The clients of Richard Fernau, FAIA, and Laura Hartman presented them with a piece of land in the inhospitable, but exquisitely beautiful, hills of western Marin county, California. Fernau and Hartman delicately sliced into the earth to incorporate their gentle addition to the landscape. The result is a quiet and respectful house.

The architects whose work is featured here understand that buildings don't have to denigrate the land. They clearly love nature, and their architecture shows it.

Elizabeth Harrison Kubany

Residential Briefs

Anderson/Ayers Residence
Fernau & Hartman Architects designs an homage to the California landscape.

208 **Kew House**
A challenging site inspires stunning simplicity in a house designed by Sean Godsell.

Tennis House
A guest house and tennis pavilion designed by Gray Organschi hews to a former quarry site.

Gordon House
Home and hillside intersect in the house G. Mackenzie Gordon built for himself.

Residential Products



"No photo eyes means no callbacks. I'm making it automatic in my homes."

Jim Ayers, Builder
Hendersonville, NC



"Safe, quiet, real cutting edge. Wayne-Dalton sure has the handle on innovation."

Bill Davis, Builder
Fort Walton Beach, FL

Our new DoorMaster™ garage door opener is the talk of the industry.

(You have their word on it.)

The DoorMaster garage door opener has it all: wireless technology to reduce builders' construction time and costs; no photo eye requirements, so misalignment callbacks are eliminated; quiet operation; and customized light location.

Plus, it has no unsightly rails or ceiling-mounted power unit, no exposed springs, no door operating arm; it's highly sensitive to obstructions; and features exclusive, built-in safety features. The DoorMaster opener, when combined with a WayneGard pinch resistant door, makes the first ever UL Listed door and opener system.

It's revolutionary, and you can quote *us* on that.



FreeVideo

To receive a free short video on the new DoorMaster opener, log on to www.wayne-dalton.com/video Or call 888-215-2225.



Wayne® Dalton

You want a Wayne-Dalton door system. (Just to be safe.)

Wayne-Dalton Corp., Mt. Hope, OH 44660 © 2000, Wayne-Dalton Corp.

CIRCLE 120 ON INQUIRY CARD

Residential Briefs

Shake, rattle, and roll: Testing the effects of earthquakes on houses

The Northridge earthquake, which shook southern California in 1994, recently struck again. But this time, its epicenter wasn't the Northridge fault line; it was 140 miles to the south, in a laboratory at the University of California at San Diego.

On July 11, through the efforts of the California Universities for Research in Earthquake Engineering (CUREe), a nonprofit corporation devoted to the advancement of earthquake-engineering research, education, and implementation, viewers were able to witness what happens when an earthquake as powerful as Northridge shakes a house.



Researchers in San Diego placing a house on an earthquake simulator to measure its strength.

According to Dr. Andre Filiatrault, a professor of structural engineering at the University of San Diego and the project's principal investigator, "Northridge really showed for the first time the vulnerability of wood frame." The earthquake inflicted considerable damage to wood-frame buildings.

The two-story, 600-square-foot test house was designed and constructed based on current building practices in California; it had a tile roof, stucco exterior finish, and all rooms finished with painted gypsum board walls. It was also fully furnished, with cameras installed to record the effects of strong motion on the building's systems and contents, including water heaters, shelving, televisions, bookcases, refrigerators, and cabinets.

The July 11 test culminated five months of testing on the house, which underwent a series of modifications to its configuration and materials to prepare it for what the researchers called "the ultimate jolt." Although the jolt was expected to severely damage the house, amazingly, it came through with just a few small cracks.

One of the lessons learned seems to be the power of stucco. The test house's exterior, like most in southern California, held a layer of stucco mounted on a wire mesh attached to the outside of the plywood sheathing. Before the jolt, most of the engineers expected the shaking to break apart the stucco.

In an earlier test, without the stucco and drywall interior walls, the top of the house swayed back and forth five inches away from the footprint. In the last test, the top swayed only one inch. In the event of a real earthquake, the kind of damage sustained by this home would only cost a few hundred dollars to repair.

Dr. John Hall, a professor of civil engineering at the California Institute of Technology and manager of the house-shaking project, said stucco and drywall "have the potential of providing a lot of earthquake resistance. The building was quite a bit stronger than when we previously tested it."

Information from this great jolt, as well as subsequent tests on the same house, will also be used to develop new standardized guidelines for adjusting insurance claims after an earthquake.

New York West: Two new loft buildings planned for San Francisco

To suit the many former New Yorkers who are now making San Francisco their home, a spate of loft buildings are either being constructed or created from existing buildings. Two currently under construction are the designs of prominent architects.

San Francisco architect Stanley Saitowitz, FAIA, in association with Natoma Architects (also of San Francisco), is designing Yerba Buena Lofts for the Yerba district near downtown. The 336,000-square-foot building includes 200 residential lofts ranging from 900 to 1,300 square feet, with an integrated 78,200-square-foot, four-level parking structure. The building, which will cost just under $40 million to construct, is being developed and built by the Pankow Companies. Completion is slated for July 2001.



Yerba Buena lofts (left) and One Embarcadero South (right).

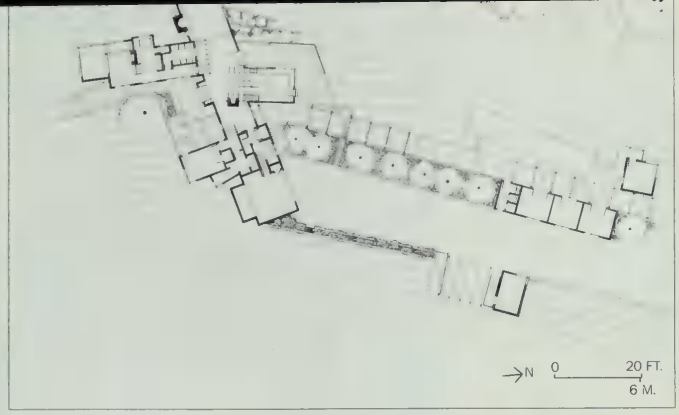
Also changing the skyline of the City by the Bay are Asymptote Architecture of New York and Tom+Aguila Architecture of San Francisco. The two firms are converting an existing residential building into One Embarcadero South.

Located on the Embarcadero promenade across from Pacific Bell Park (home of the SF Giants), the building will feature 233 residential units in twin towers with a three-level podium amenity area. Among the building's technological services are 24-hour continual high-speed Internet connections, and an intranet amenity system called WebConcierge.

One Embarcadero South is billing itself as "America's smartest residential complex" because of these amenities. Asymptote Architecture is well versed in the challenges of integrating technology with architecture, having created the new New York Stock Exchange's Virtual Trading Floor.

FEATURE HOUSE **With simple forms and understated colors, the Anderson/Ayers Residence pays homage to its site**





By Lisa Findley

The landscape of western Marin County in northern California is not very hospitable: by early summer the grass is golden brown and subject to wildfires for the rest of the year; unstable soil covers the steep slopes; the forests are thick with poison oak; and on any given summer morning, chilly fog can blanket the area, only to be chased away by a stiff wind in the afternoon. The rolling, grassy hills have their own rugged beauty, however, and are increasingly populated by expensive vacation homes scattered among existing working farms. Unlike the farm buildings, which modestly occupy low areas protected by topography, the second homes often perch awkwardly on the hills, commanding the vistas while also asserting themselves into the view.

Borrowing from the landscape

In its recently completed Anderson/Ayers house, the Berkeley, Calif., firm Fernau & Hartman took on all the complexities of making architecture in this sublimely beautiful place. Drawing on its experience in building on

Project: *Anderson/Ayers house, Nicasio, Calif.*
Owner: *Jane Anderson and Tess Ayers*
Architect: *Fernau & Hartman Architects—Richard Fernau, FAIA, and Laura Hartman, AIA, partners-in-charge; Susan Stoltz and Scott Donahue, project architects*
Engineers: *MKM & Associates and Richard Hartwell (structural); Lefler Engineering, Inc. (mechanical)*
General Contractor: *Kerr Construction*
Area: *3,000 square feet*



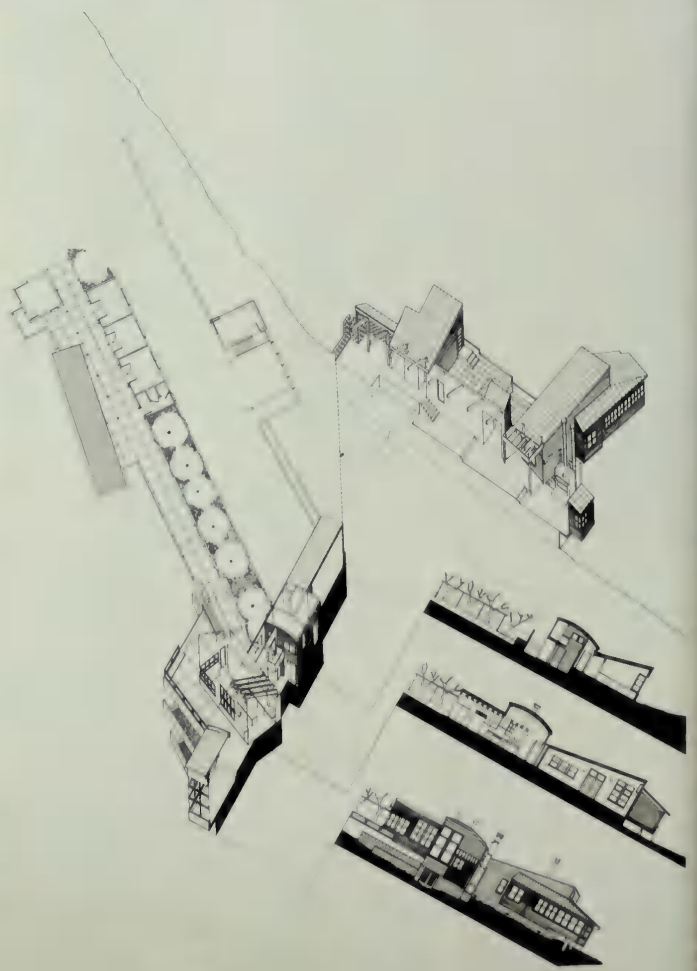
Rather than perching on the highest point of its site, the Anderson/Ayers house sits respectfully in the hillside. It still enjoys magnificent views of western Marin County.



The "introverted" exterior—with its simple forms, green and gray wood siding, and gray-green metal roof—blends masterfully with its surroundings, making it seem like an extension of the landscape.







The "great room" comprises the main body of the house.





Even on the interior, the Anderson/Ayers house is intricately linked to its site.

Views of the outdoors are available from every possible angle and level.



strong, natural sites, the firm designed this 2,700-square-foot vacation home for a dramatist, a writer, and their small child. The clients had asked for a comfortable house that would be a retreat—but not a complete escape—from their fast-paced Los Angeles lives. They still wanted a taste of the theater to follow them to Marin. According to the architects, "Their desire was for a 'barn/theater'—introverted on the exterior and extroverted on the interior. The house is not only a retreat from the wind and fog, but also a venue for traveling players."

Richard Fernau, FAIA, and Laura Hartman are intrigued by just such challenges. They have adopted and personalized landscape strategies such as Frank Lloyd Wright's insistence that a building on a hill be placed well below the crown. Also incorporated are the Japanese concepts of "borrowed landscape," where views outside the site are visually included in the design of the interior, and of the conscious layering of foreground, middle ground, and background. Fernau & Hartman's design also respects the basic volumetric relationships of the nearby farm compounds with their grand, simple barns and scattered outbuildings.

Modest on the outside

The long, low house sits high on a slope overlooking a reservoir and the surrounding hills. Rather than placing the house on the highest point of the site, the architects pulled it down in close proximity to a rock outcropping surrounded by small trees. This hillside placement gives the house a sense of belonging to a particular location in the vast landscape, embracing these natural features that are closer to its own scale.



The serene color scheme of the exterior relates the house to the landscape, with its almost entirely green and gray wood siding, and gray-green corrugated metal roofs. (The sleeping area of the master suite is the one exception; it is covered by an intense red roof.)

With great care, the architects cut into the site parallel to the slope, allowing the house to settle into the hill and reducing its apparent bulk. The resulting long retaining wall edges the driveway, holds a cozy writing studio and carport at midpoint, then transforms into the uphill wall of the garage and house. Just below the driveway sits a line of native trees. Below that is a pergola that serves as a porch.

THE DESIRE WAS FOR A 'BARN/THEATER'—A VENUE FOR TRAVELING PLAYERS.

The slender body of the house juts out at a 45-degree angle from the retaining wall, perpendicular to the slope. This placement sets up a rich range of relationships of house to the sloping site and the views. There are generous doses of the breathtaking panorama, but they are tempered by the middle-ground views of the nearby rocks, which add to a sense of scale and detail.

Bold on the inside

The "extroverted" interior is warm and lively, with carefully shaped areas of obvious performance and areas of backstage privacy. The main body of the house contains a "great room" for dining and living. The space is enveloped in plywood with a ceiling of curved glue-laminated beams reminiscent of a ship's hull. The floor steps down in places, helping to define smaller spaces within the large room. The tallest space, at the downhill end, contains the fireplace, while the corner opens up to a denouement of panoramic views. Sunlight fills the whole room on clear days; when the fog and rain set in, well-designed lighting makes the bad weather seem to disappear.

The kitchen and bedrooms are arranged off this large space according to their role in the drama of the retreat. For instance, behind the garage, nestled partially below grade, is the hidden storybook realm of the child's bedroom. Here, the slope of the hill runs down to meet a corner window just below the sill. From inside, the child's-eye view is just a foot above the ground, where insects struggle through the grass and wildflowers bloom.

Inside, a wainscot of green chalkboard invites coloring on the wall. In the more adult world, the kitchen and master bedroom each become stage sets onto the theater of the great room. The kitchen opens off at a slight angle, with the overlap between the two spaces articulated horizontally both overhead and underfoot. The depth of the kitchen is a proscenium stage where food and cooking are showcased.

The volume of the master suite angles into the great room as well. Rather than opening up into the space, this private world is presented as the front of a tiny house, covered in tongue-and-groove siding with a wood-framed overhang supported on eight-by-eight wood columns that



Some rooms allow the landscape to be seen up close, while others offer broad panoramas. From the writing studio, the house's occupants can contemplate nature.

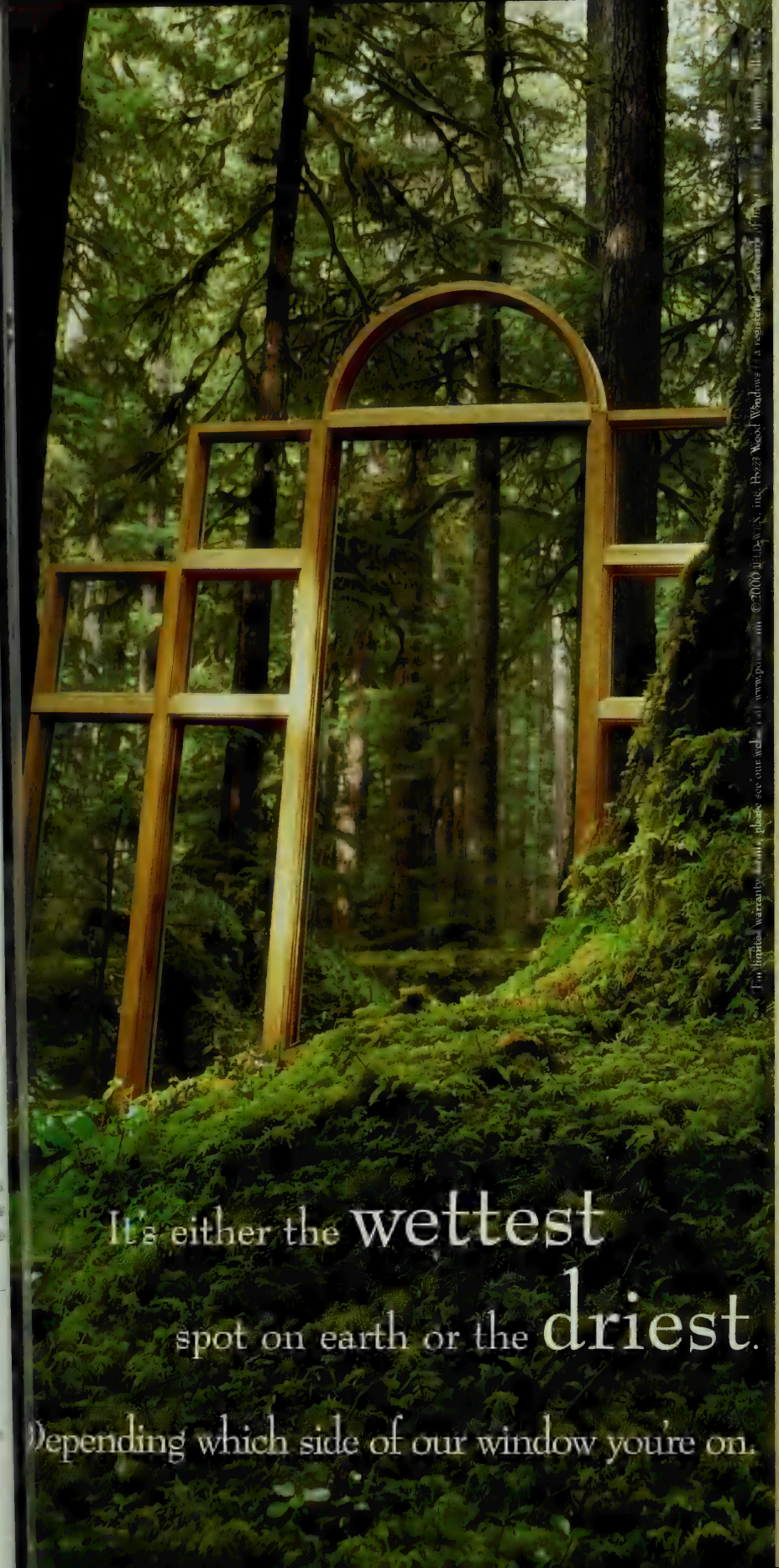
suggest a front porch, complete with yellow porch light and rocking chair. Behind this prop, the master bedroom is a warm, private place that offers three diverse experiences of the site: the distant panorama, a view of the slope running alongside, and a view back up the slope.

A second phase for the house calls for an extension of the pergola, which serves as a front porch, to a series of bunk rooms edging the downhill side of the driveway. Another writing studio and a swimming pool, captured in the space between the pergola and the rocks, are also planned.

The Anderson/Ayers house is masterful on many levels. The architects have successfully negotiated the difficult act of placing a building in a delicate, unbuilt landscape. The inhabitants of the house can enjoy a full range of interior and exterior experiences of the site in all seasons. And because it is deftly specific to both the site and the clients, this is an unrepeatable house that provides valuable lessons—lessons that would not have been wasted on the person who designed the enormous peach-colored stucco house casually set on a nearby hill. ■

Sources
Masonry: *Calstone*
Skylights: *O'Keefe*
Metal doors: *Blomberg*
Wood doors: *Simpsom*
Sliding doors: *Blomberg*
Locksets: *Baldwin*
Resilient flooring: *Forbo Marmoleum*
Paints and stains: *Ameritone, Benjamin Moore, Fuller O'Brien, Kelly Moore*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**





Dan Stokes,
Product Testing Manager

It doesn't rain all the time in Bend, Oregon. Only when Dan Stokes wants it to. You see, Dan tests the seals of our wood windows to help ensure your customers' satisfaction. Thus, the 8 inches of rain per hour. Hurricane force, 155 m.p.h. winds, and countless other Dan-made extremes. Thanks to a sturdy 20/10-year warranty*, our windows are an attractive choice you can live with. After all, they've already had to live with Dan.

POZZI
WOOD WINDOWS®
Part of the JELD-WEN® family

HANDCRAFTED IN BEND, OREGON.™

CIRCLE 121 ON INQUIRY CARD

Free catalog: 1-800-257-9003 ext. P10.

Or visit us at www.pozzi.com

A writer tells of her own steel-framed home, designed by her husband, architect Sean **Godsell**, to capture the spirit of the Australian outback



An electrically operated door opens to become an entrance canopy. The landscaping, with its wild beauty and native grasses, seems to encroach on the steel box.

By Annemarie Kiely

It is amusing to hear first-time visitors to Australia wonder at the size and sophistication of our cities. The misconception that Australians are dwellers in an inhospitable landscape who must dodge hopping marsupials is instantly cracked by a cab ride from the airport.

Melbourne, the capital city of the State of Victoria, is a young, multicultural city whose burgeoning cityscape tells of architectural one-upmanship and sports fanaticism. Because of its location at the southern end of our island continent, it enjoys a mostly temperate climate with seasonal fluctuations. It is a city where lively debates on the subjects of regionalism and republicanism can often be heard, in a country that has long suffered or, depending on your viewpoint, benefited from its isolation.

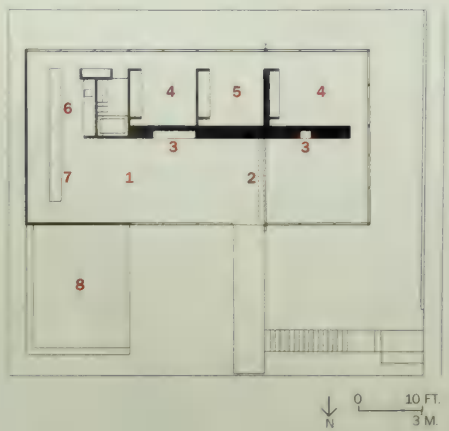
My husband, the architect Sean Godsell, believes that the cultural climate and socio-political landscape of our city and country are as important in shaping our built environment as temperature and topography. In his words, "We are an adolescent nation in search of an identity." I am a writer and a mother, constantly in search of quiet space





As seen from the street, the house cantilevers out over the front garden.





1. *Living room*
2. *Sliding wall*
3. *Fireplace*
4. *Bedroom*
5. *Study*
6. *Kitchen*
7. *Table*
8. *Deck*

as my books and my son's toys seem to multiply at an alarming rate.

Several years ago we reluctantly conceded that our inner-city dwelling (an intricate three-level infill house that Sean had designed) was being pushed to its limits by our young son, Jack. "The boy needs a backyard," Sean said, so we sold our home and went in search of one.

Two years later we found a beautiful piece of land close to Melbourne. With its beautiful views and mature trees, the house occupies an inner-city "bush zone" in the genteel suburb of Kew, near the Yarra River. We exceeded our budget when we bought it at auction, spending the princely sum of A $165,000 (around U.S. $95,000) for the house.

A large concrete retaining wall rose about five feet above street level, so there was no access other than through a neighboring property. The property measured 66 feet square, with a 23-foot change in level from the front to the back. Excavation into the block was, for financial reasons, out of the question, so Sean decided to make the most of the given conditions and designed a steel-framed glass box to perch on its slope. A flight of stairs leading to a timber walkway now gives access from the front of the property to the new house.

During construction, the framework was lifted onto the site by

Project: *Kew House, Melbourne, Australia*
Owner: *Sean Godsell and Annemarie Kiely*
Architect: *Sean Godsell Architects—Sean Godsell, partner-in-charge*
Engineers: *John Mullen + Partners PTY (structural and civil), Gordon Ford (landscape)*
General contractor: *R.D. McGowan Building*
Square footage: *1,700*
Construction cost: *$100,000*


OWENS CORNING
Tune In.
SelectSound® Sound Quality System
Theater quality sound is a major asset in today's custom homes. And the Owens Corning SelectSound Sound Quality System is designed to provide it. Elegant, acoustically engineered wall panels absorb and reflect sound as needed—allowing you to "tune" any room for optimum acoustic performance. It's one smart part of our total acoustic solution.
THE NEXT WAVE IN HOMES IS CUSTOM ACOUSTICS.
Tune Out.
QuietZone™ Noise Control System
Working. Sleeping. Escaping. Whatever the reason, more customers are asking for dedicated "quiet zones" within their homes. Owens Corning's integrated QuietZone Noise Control System absorbs, blocks and isolates undesirable noises, turning any room into an oasis of peace and tranquility. It's one smart part of our total acoustic solution.
For more information, visit our website at www.owenscorning.com or call 1-800-GET-PINK
OWENS CORNING WORLD HEADQUARTERS
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO, USA 43659
CIRCLE 74 ON INQUIRY CARD





crane and bolted together like a child's Lego set. Positioned longitudinally on an east-west axis, it rests close to the southern boundary (allowing for maximum sun exposure on the long northern side), and cantilevers slightly over the slope. This exposed a large portion of the building's underbelly—the sixth elevation as we call it—to street view, so Sean clothed it in the same sheets of steel that line the inside wall of the building's east end. Extremes of climate were addressed by turning many of the building's glass walls into sliding panels for natural breezeway ventilation in summer. Standard pieces of industrial steel grid flooring (an homage to Jean Nouvel's Bordeaux hotel extension) were hung over the north, west, and part of the southern facades to provide shade in summer and allow maximum sun penetration in winter. Individual sections can be opened and closed by electrically operated hydraulic rams. These grids provide a sturdy veiling that generates a psychological comfort for inhabitants. They are also part of the land; they invoke the spirit of the outback—where everything has a function beyond

The steel grille, with its rusted patina, provides a sense of security as well as constantly changing patterns and colors, depending on the light. The wall-to-ceiling glass skin allows the outdoors to come in (below).





WHAT'S IN A NAME?

For over 40 years, Wausau has built a reputation manufacturing the most innovative and most dependable window and wall systems available. And we've offered architects, building owners and contractors peace of mind. How? Precision engineering, the finest products and unrivaled customer service. That's how. Contact Wausau Window and Wall Systems today.



Life is good...because Wausau's good.

WAUSAU

WINDOW AND WALL SYSTEMS

CIRCLE 75 ON INQUIRY CARD

1.877.678.2983
www.wausauwindow.com



its intended one—and appear to be covered in the outback's red ochre dust (in fact, the steel was oxidized with acid to promote a rust patina, then sealed with primer).

Sean's work manifests an interest in an Australian vernacular, but one whose politics concede an Asian influence, as is evident in the eastern aspects of the house. A single white spine of storage divides the building lengthwise into living and sleeping areas. On the sleeping side, individual rooms are separated by more walls of storage, with sliding doors intersecting a perimeter passageway when shut and connecting rooms when open. On the living side, one large wall can be pulled from a cavity behind a bedroom storage unit to turn a luxurious 59-by-13-foot zone into two smaller rooms (each with its own fireplace). When all doors are open the perimeter becomes a racetrack that provides endless delight for Jack and his remote-control cars.

Located at the eastern end of the building, the kitchen is not easily seen from the living room, but its presence is suggested by a long table that projects into the living room space. Referred to by Sean as "the icon of western culture," our kitchen table is used for many activities besides dining—homework, family conversations, food preparation. All three of us can help prepare Saturday's breakfast without a border dispute.

The house is small but feels big—an illusion enhanced by the building's transparency and relationship to the land. The late Gordon Ford, a pioneering landscape designer who saw the house as an "exciting piece of sculpture," completed Sean's vision with the selective placement of basalt boulders—placed right into the earth so as to appear stratified—and feathery Pennesetum grasses. When the prevailing wind blows, the house appears like a derelict crate awash on a sea of undulating green.

I consider the house both poetic and provincial, but not everyone agrees. As many times as we have been congratulated on the result, we have heard the scream: "What an ugly house, who'd live in that?" But we don't mind. We are just glad people are as passionate about it as we are. ■



Inside and out, a sense of openness pervades. The simplest of furnishings were chosen so as not to distract from the open floor plan. From every vantage point, the distinction between indoors and outdoors is blurred.

Sources

Exterior steel grid: *A.E. Vickery Richmond Steel*
Structural system: *A.E. Vickery Richmond Steel*
Exterior glass panels: *Pilkington*
Upswinging metal door: *Magnetic Automation*
Hardware: *Lockwood*
Interior lighting: *Eurolice*
Exterior lighting: *Richmond Lighting*
Controls: *Atco Australia*

The right door can make any place more inviting.





Now, think what our custom doors could do for your home. A door with no boundaries, save those of your imagination. A door handcrafted in the Old World style from the most beautiful hard woods available: Genuine Mahogany, Cherry, Maple, Walnut and Northern Red Oak. International Wood Products can deliver this door. All the way from your mind straight to your dream home. 1-800-877-9482 ext. IWP1 www.iwpdoor.com

IWP

©1999 JELD-WEN, inc. All rights reserved. JELD-WEN, IWP and the IWP logo are registered trademarks of JELD-WEN, inc. Klamath Falls, OR

CIRCLE 76 ON INQUIRY CARD

A guest house and tennis pavilion designed by Gray Organschi hews to a former quarry site

By William Weathersby, Jr.

Designing a private guest house and tennis pavilion in a pastoral setting presented a complex challenge for Gray Organschi Architecture: how to accommodate a family's fully loaded wish list of amenities—including a tennis court—on a site saddled with restrictive land-use easements?

The Tennis House is one component of a 170-acre estate in Litchfield County, Conn., which the firm is designing as the client's year-round retreat. A garage/workshop and caretaker's cottage were built prior to this latest phase, while work on the 15,000-square-foot main house is slated for completion in 2002.

The hybrid guest- and clubhouse comprises a two-level building hugging a tennis court at the southern end of a valley that was once a commercial gravel quarry. "We were compelled by the character of the land as we first found it," says principal architect Alan Organschi, "a hard-scrabble bowl surrounding a small, natural spring-fed pond and overgrown with wildflowers and thin meadow grasses." Adds partner Elizabeth Gray, AIA, "We wanted our design to negotiate the relationship







Viewed from the meadow, the sod roof of the Tennis House appears to have been lifted out of the terrain. The roof overhang creates a covered porch (above right) for viewing tennis play or the spring-fed pond (above left).

The spruce-framed roof is supported by 10 cypress columns and a wooden box housing the changing rooms and shower. Swinging doors of river-recovered cypress open at court-side for lower lounge viewing (below).









With sleeping bunks on the lower level, the pavilion functions as an overnight guest house (top). Limestone flooring continues from the terrace into the living/dining area. Teak doors slide back at the corner of the room to frame views (middle). The fireplace is an amenity (bottom); the primary heating system is geothermal. Counters are slate.

between the quality of the site as a former earthwork and its eventual role as a garden. We were struck in particular by the character of the thin new plane of surface vegetation that covered this former industrial site, and its manipulation became a theme in developing both the house and court."

The land at the floor of the valley is protected by a local conservation easement because of its location in the Bantam River watershed, so the building size was limited to a habitable space of less than 600 square feet per floor. The clients, however, presented an ambitious program for the constricted footprint: two changing rooms, a bathroom, kitchenette, laundry, bunk room, and multifunction living and dining area with a terrace overlooking the tennis court, pond, and the foothills of the Berkshire Mountains beyond.

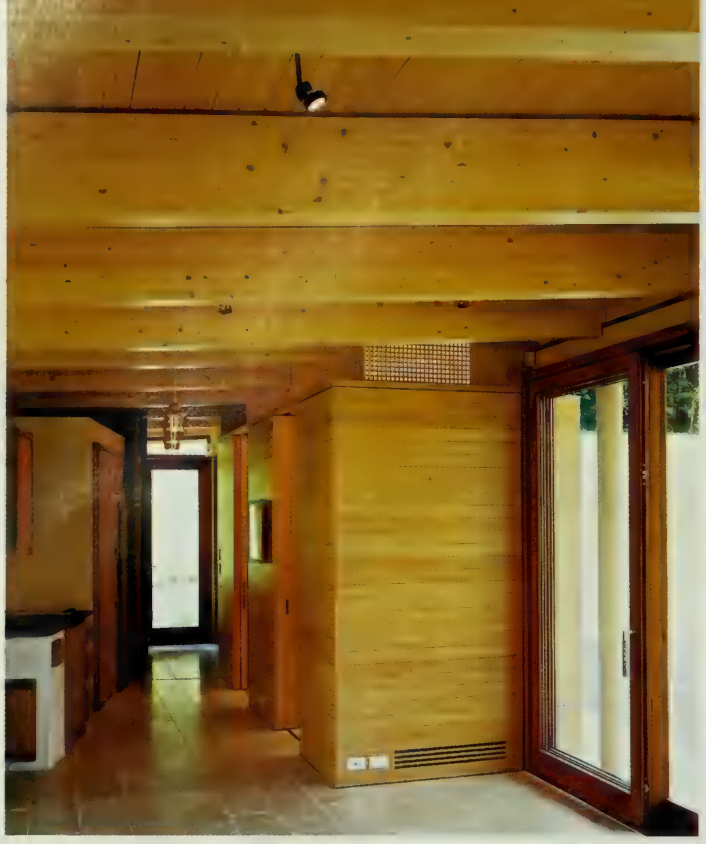
The architects cut the tennis court into the southwestern edge of the basin that forms the pond. Board-formed concrete retaining walls shape the enclosure on three sides of the court, while the corner exposed by the falling grade is hemmed by a removable curtain of netting suspended from tension cable. The tops of the concrete walls align with the natural elevations of the surrounding land, rising and falling with the hillside's grade. A border of clover and vetch was planted to cascade over the edge of the concrete wall, visually diminishing the structure's mass. Viewed from the landscape, the court appears to have been neatly cut into the otherwise undisturbed meadow as it slopes to the water's edge.

The house itself also appears to have cropped out of the hillside. Ten tapered cypress columns and a wooden box containing the changing room and shower prop up the structure's glue-laminated, spruce-framed roof. The trapezoidal shape of the roof provides a low corner from which the rainwater drains into a concrete catch basin. The splay of its substructure addresses the orientation of the court—situated 22 degrees west of due north, the optimum orientation for tennis play at this altitude—with its axis aligned toward the long view up the valley. Covered with wild grasses, flowering weeds, and sedum and punctuated by only a skylight and concrete chimney, the plane of the roof seems to rise out of the surrounding meadow to protect the dwelling beneath it.

The overhang of the roof along the eastern elevation creates a covered porch for viewing tennis matches. The same limestone that surfaces the terrace continues along a courtside balcony and within the second-floor lounge area. Floor-to-ceiling sliding doors framed in teak

Project: *Tennis House, Litchfield County, Conn.*
Architect: *Gray Organschi Architecture—Elizabeth Gray, AIA, Alan Organschi, partners-in-charge; Chris Louden, project manager; Kelly Feeney, Pankaj Vir Gupta, Tarra Cotterman, Vicente Sauceda, project team*
Engineers: *Gibble Norden Champion (structural); Tucker Associates (mechanical)*
Consultants: *Origin Lighting Design—Ken Daniel (lighting); Performance Imaging (communications/security)*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**







Two side-by-side changing rooms are enclosed in a cypress box (above). The structure is topped by a perforated, maple-veneer plywood screen that filters rays from a skylight into the main space (right). Gray Organschi's woodworking shop fabricated the turned cypress columns that support spruce roof beams (above right).

open the room to breezes and views. At the opposite end of the room, a bar and kitchenette feature rough-hewn slate countertops and custom cypress cabinetry. Two changing rooms are accessed via pocket doors. A sliding cypress door separates the main entertaining areas from a shower room, which leads to a second shower perched on the terrace.

River-recovered cypress cabinetry is combined with spruce millwork to refine the interior.

Because of the restricted zoning requirements, the architects linked the two levels of the Tennis House with an outdoor staircase covered by the roof overhang. Initially programmed for equipment storage, the main space of the lower level was adapted to function as a secondary lounge space and overnight guest room for grandchildren. Four built-in bunks with nightstand alcoves give the room the streamlined look of a ship's cabin. And tempered-glass casement doors facing the court provide occupants with a tournament lineman's view of tennis matches.

Well integrated into the landscape and displaying a palette of finely worked materials, the Tennis House also embodies notable technical features. Addressing both aesthetic and horticultural concerns, the architects reduced the thickness and weight of the sod roof with a custom drainage system. Between the waterproofing membrane and soil layer is a 1½-inch-deep perforated plastic grid, formed like an egg carton, which holds water until it overflows the perforations at the top and drains through and out. This reservoir of water allows for soil depths of only 3 inches, although sod usually requires at least 6 inches of earth to support plant growth without constant irrigation. The shallow bed also helps to sustain the wild grasses and flowers native to the quick-draining soil and gravel of the site.

The building is heated and cooled by a geothermal heat pump, which adapts the water of the quarry pond as a thermal mass. In addition to providing energy and cost savings, the system has freed the bucolic property from the intrusion of heavy delivery trucks carting in fossil fuels. ■

Sources

Roof frame: *Architectural Timber and Millwork*
Windows, doors: *Case Window and Door, Amherst Woodworking, South Farm Construction, Guy Gillette*
Cabinetry, millwork: *South Farm Construction, Kingsland Architectural Millwork*
Wood stains, plaster wall finishes: *Crook Associates*
Hardware: *Nanz Custom Hardware, Edelman Metalworks, Leatherneck Hardware, D-Line*
Limestone flooring: *Valley Marble*
Countertops: *Petmal Supply*
Radiant floor heating: *Wirsbo*
Sod roof: *American Hydrotech*



DOUBLE WIDE. The new wide Wood I Beam™ joists from Georgia-Pacific. With an impressive 2 1/2 inch wide LVL or Solid Sawn flange (3 1/2 for the W I 80), our Wood I Beam joists are 66% wider than traditional framing or narrow joists. More nailing surface makes them easier to use, and more mass means a more solid feeling floor. From the company that has led wide flange technology for over 10 years, our new joists are part of the most complete line of wide flange joists in the industry. All meet PRI-400 standards and carry a lifetime limited warranty. Choose Wood I Beam joists. Because wide matters. For wide Wood I Beam joists, call us. **1-800-BUILD-GP** or visit **www.gp.com**

Georgia-Pacific
WOOD I BEAM
WIDE MATTERS

CIRCLE 77 ON INQUIRY CARD





A blanket of juniper covers the buried roof, an 11-inch-thick reinforced-concrete plate. Bluestone terraces edge the rear of the house (insets), while plantings soon will climb up or cascade down most exposed concrete walls.

Home and hillside intersect in the house architect G. Mackenzie Gordon built for himself

By William Weathersby, Jr.

Driving along the winding country roads near Lakeville, Conn., visitors pass postcard-ready vistas of architecture frozen in time: 18th-century clapboard farmhouses, faded red barns, and rusticated stone churches graced with stately stained-glass windows. In the house architect G. Mackenzie Gordon, AIA, built for himself, however, details that are out of step with local tradition catch the eye. Visible from the road is a silo, but closer inspection reveals it is banded by glass-block windows—and it rises not from a barn but directly out of the hillside. Also sprouting from a blanket of junipers and black-eyed Susans are utilitarian yet sculptural forms, including an abbreviated chimney and wedge-shaped clerestory structures backed by solar panels. Where's the house? Exploring his theories of integrating residential architecture within rural landscapes, Gordon has gone underground.

Trained as both an architect and landscape architect, Gordon says he has always welcomed commissions that combine structure and site in unorthodox ways. "I had long had in mind to design a house for my wife and me as an earth shelter," says Gordon, who relocated his architectural practice to northwest Connecticut from New York City. "This open, sloping site lent itself to building below ground, which preserves the natural setting while helping to conserve resources."

Insulated by the earth, the house employs systems designed for energy efficiency. Solar water heaters, with propane backup systems, supply domestic hot water and radiant heat through tubes cast into a concrete floor slab. A heat-recovery ventilator provides fresh air during the winter months. "The thermal mass of the concrete and masonry helps keep the inside temperatures comfortable and even," Gordon says.







Shrubbery takes the place of a railing around the parapet and retaining walls (above and below). Backed by solar panels, clerestory structures sprout from the landscaped roof (top). The silolike form houses a staircase.



Set amid eight acres of former farmland, the 3,200-square-foot, three-bedroom house is carved into the apex of a hillside. From a winding driveway one approaches the structure's southern elevation, which all but disappears into the landscape. Meanwhile, a wall of windows captures views extending for 20 miles through a mountain valley into Massachusetts. A detached garage at the corner of the site helps to frame an arrival courtyard and masks the view of a neighboring house.

With its covering of evergreens and flowering plants, the house blends into the natural terrain.

Rooms are aligned along a corridor that spans the length of the house, forming an east-west axis. "The main level is basically a ranch house plan submerged into the ground," Gordon says. Though earth shelters can be constructed from a variety of materials, cast-in-place concrete appealed to the architect for its "monolithic character, both structurally and aesthetically." All foundations, columns, exterior walls, parapet, roof, and floor slab are concrete. Interior partitions and the roof beneath solar collectors are framed in wood. Custom exterior window and door frames are maple, with an outdoor layer of teak.

At the eastern end of the house, a spiral-stair tower mimicking a silo leads to a second-floor office—a space designed for Gordon's wife,

Project: *Gordon House, Lakeville, Conn.*
Architect, landscape designer: *Gordon & Gordon—G. Mackenzie Gordon, AIA, principal*
Engineers: *Robert Silman Associates (structural); Mark Rosenbaum (mechanical); Sharon Electric (electrical); Reginald Hough (concrete)*
Consultants: *Mark Swann (fireplace); Peter Pixley (masonry); William Perotti & Sons (HVAC, plumbing); Brian Richardson (tile work); Bunce Construction (grading)*
General contractor: *Morck Brothers Builders*

Everybody...







It's true for people—and it's true for owls, murrelets and salmon, too.

When we design and build our homes, we have many choices; and those choices affect the future for us all. We want to choose materials that are renewable, recyclable, energy efficient and biodegradable. We prefer materials produced locally, rather than exporting our environmental burden to other regions. These are all important reasons why wood from our own forests is our favorite building material.

Birds, fish and other animals don't have nearly as many choices as we do. That's why those of us at The Pacific Lumber Company go out of our way to protect the forests and streams on our property. We work hard every day to make sure that wildlife can find a home in our woods and in our waterways.

For 130 years, The Pacific Lumber Company has harvested timber from our privately-owned lands. We grow, harvest and replant trees on a sustainable basis, and we continue to provide the highest quality redwood and Douglas fir lumber available. When you use our products, you can be assured that you are making a responsible choice for today's homes and tomorrow's forests.

needs a home.

PALCO

The Pacific Lumber Company

P.O. Box 565
Scotia, CA 95565-0565
Telephone: (707) 764-8888
www.PALCO.com

CIRCLE 78 ON INQUIRY CARD



Beyond the galley kitchen (right), a spiral stair leads to a tower office and upper terrace. Windows wrap a corner of the dining area (below). Board-formed concrete adds texture to the ceiling.



film producer Doro Bachrach—and upper terrace. The tower is topped with a prefabricated-metal silo dome. Inside and outside, exposed concrete surfaces are board-formed, "a nice technique for providing texture while masking defects," Gordon says. "We used the cheapest, roughest boards available, so the grain imprints are crude in a pleasant way."

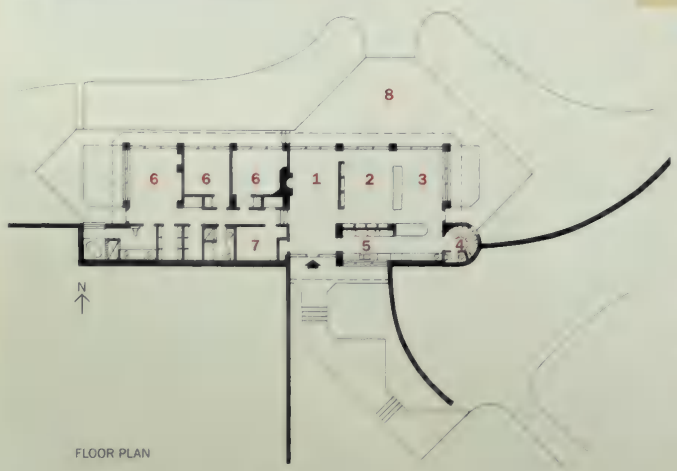
The main living and dining areas, aligned to face the spectacular views, flow together as one large space interrupted only by a freestanding bookshelf and credenza. Three bedrooms also are oriented toward the northern exposure, with two bathrooms, a mechanical room, and kitchen stacked along the earth embankment. Skylights lessen the feeling of being underground, while the primarily open plan creates clean sightlines.

A palette of natural materials wraps the interior. Millwork and cabinetry throughout is solid sugar maple, while slate floors complement skim-coat plaster walls buffed with a waxed finish. Aside from a clear finish on the woodwork, no paint or stain was used. Much of the furniture is built in, with lighting mostly recessed. "I wanted to let the construction forms themselves be the visible expression of the house," Gordon says.

The interior palette of natural materials lets the construction forms speak for themselves.

A hideaway submerged below a sea of plantings, Gordon's house fulfills his vision of a place where shelter and nature merge. ■

1. *Living room*
2. *Sitting room*
3. *Dining room*
4. *Stair to tower*
5. *Kitchen*
6. *Bedroom*
7. *Mechanical room*
8. *Terrace*



FLOOR PLAN

Sources

Windows, exterior doors: *Case Window and Door*
Interior doors: *New England Screen Door*
Cabinetry, millwork: *Bert Fitch, Peterson's Millworks*
Flooring: *Domestic Marble and Stone*
Tile: *Elon Tile*
Concrete: *Reinforced Concrete Services*
Skylights: *Velux, Wasco*
Solar panels: *South Mountain Solar*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**

ROHL

TUSCANY



ROHLs' Tuscany Bath Collection combines comfortable dimensions with elegant designs, quality finishes and expertly engineered 1/4-turn ceramic valves. Choose from 15 possible faucet designs, a complete accessory collection, and coordinating shower heads and hand sprays to add the ideal accent to a master bath, powder room or shower. Available finishes include Satin Nickel, Polished Nickel, Inca Brass, Chrome and Tuscan Brass. ROHL is a leader in providing exclusive bath and kitchen products for America's finest homes. ROHL offers unparalleled inventory, technical support and a commitment to customer service. ROHL products are available nationally through a network of representatives, distributors and dealers.

Call or visit our Web site learn more about ROHL products and locate your nearest dealer.

ROHL

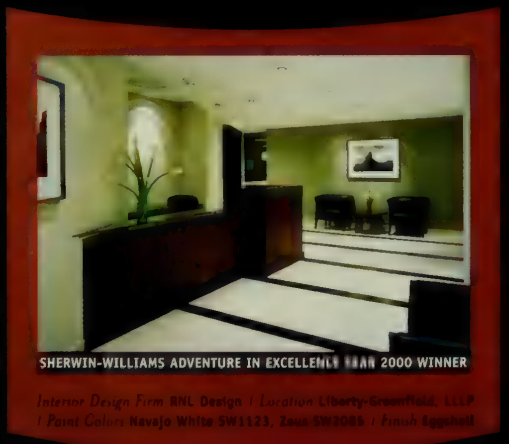
1559 Sunland, Costa Mesa, CA 92626
(714) 557-1933 • Fax (714) 557-8635
New York Metro • San Francisco
www.rohlhome.com

CIRCLE 79 ON INQUIRY CARD



THERE IS A LIMIT TO THE IMAGINATION.

There are financial realities. Product requirements. Time constraints. The designer has a vision. And you help bring that vision to life. You find a way to meet everybody's expectations. Assuring that the project delivers in both the artistic and practical sense. Working out a way to make the vision itself yet another reality. That's what the RNL Design team successfully did in specifying the coatings and creative color scheme for Liberty-Greenfield, L.L.P.



Interior Design Firm RNL Design / *Location* Liberty-Greenfield, LLLP / *Paint Colors* Navajo White SW1123, Zeus SW2085 / *Finish* Eggshell

SHERWIN-WILLIAMS

The paint. The possibilities.

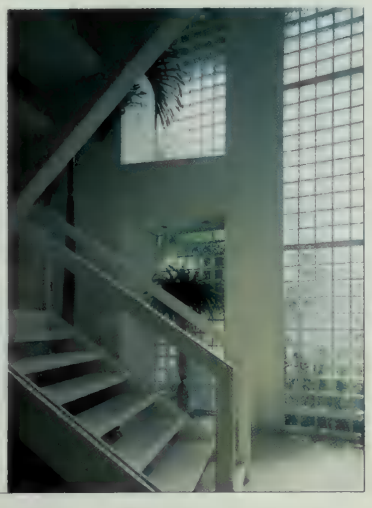
Call our Architect & Designer Answerline at **1-800-321-8194** for color and product information on your next project.

CIRCLE 80 ON INQUIRY CARD

Residential Products

Blending with the landscape

► Increased exposure



Acme Brick's new IBP grid system reduces the grid's aluminum T-bar framing by 50 percent, from ¾ inch to ⅝ inch, producing a gain in light transmission. The system, which features glass block in a selection of colors and patterns, can be used for windows, skylights, shower enclosures, and partitions. IBP panels can be mullioned together to create vast expanses of glass block for exterior walls. 800/932–2263. Acme Brick Company, Fort Worth, Tex. **CIRCLE 200**



▲ Sunscreen for your home

Besides offering homeowners natural light and greater outdoor views, Velux's skylights with Comfort-Coated Glass feature a laminated inner pane that provides safety from impact situations, such as hailstorms and high winds. The skylights reflect 99 percent of ultraviolet rays, which can cause carpet and furniture to fade. The glass also has a double layer of Low-E coating to act as a heat barrier. Argon gas, injected between the panes, increases the thermal performance. Velux also offers a selection of pleated shades and venetian blinds with a specially formulated, energy-efficient, reflective coating. 800/283–2831. Velux-America Inc., Greenwood, S.C. **CIRCLE 202**

► Bug-free by nature



L/P Evans Western red cedar decking integrates home and landscape, makes use of damp or uneven terrain, and is naturally resistant to decay and insect attack due to inherent preservative oils. The red cedar, suitable for decks, patios, and other outdoor uses, comes from the interior of British Columbia, a region noted for the good knot quality of its cedar. The decking is available in two-by-four, two-by-six, and two-by-eight-inch widths. 604/643–5850. Louisiana-Pacific Corporation/Evans Forest Products, Vancouver. **CIRCLE 204**

► Back woods



Iron Woods brand hardwoods can be specified for residential deck building, fencing, furniture, docks, outdoor raised gardens, trellises, cabinetry, pools, whirlpool surrounds, and an array of remodeling projects. The wood can be used to connect exterior and interior spaces and to extend the total living area of the home. It requires no chemical preservative or water-repellent sealers. 414/445–8989. Timber Holdings Ltd., Milwaukee. **CIRCLE 201**



◄ A place in the sun

Sunrooms can be used for home offices, reading rooms, spas, greenhouses, or guest bedrooms. Specifiers have a choice between seasonal single-pane glass rooms, extended-use rooms with insulating glass, framing and roofs, and the all-glass solarium. The ComfortView Room features enhanced energy efficiency, greater view area with tempered safety glass, and European styling. Patio Enclosures holds the patent for the sunroom's glass-panel roof system. 330/468–0700. Patio Enclosures Inc., Macedonia, Ohio. **CIRCLE 203**



▲ Porcelain patio

Named for a nature preserve in Austria, Gold Seal's Karwendel porcelain tiles feature a clean, glazed look. Because it is a porcelain line (the brand's first), it is suitable for outdoor applications. The line comes in three color options—Day's End, Forest Floor, and Winter's Blanket—and is available in 12-by-12-foot field tiles, with 4¼-by-4¼-inch fossilized dot accents. Gold Seal tile collections are available with complementary trim. 877/370–5503. Florim USA, Clarksville, Tenn. **CIRCLE 205**

Residential Products

Blending with the landscape

▼ Air comfort system



In summer, Aprilaire's Fresh Air Exchanger removes heat and moisture from humid incoming air and transfers them to the outgoing airstream, reducing the load on the air conditioner. In winter, the Exchanger keeps heat and humidity loss to a minimum by transferring them from the outgoing warm airstream to the incoming cool airstream. Aprilaire's Zone Control System provides the flexibility to divide the home into as many as four zones per heating and cooling system. It works with virtually all mechanical and electronic thermostats. 800/545–2219. Research Products Corporation, Madison, Wis. **CIRCLE 206**





◄ From the old country

Subtle moss and sage green overtones and traces of taupe and plum enhance Old Country, an eighth color for Cultured Stone's rough-hewn Cobblefield texture (shown). The result is a rugged yet trim stone veneer with the appearance of age-old quarried rock. Six more colors join Honey, Chardonnay, Caramel, and Aspen to give Country Ledgestone 10 colors in all, the most of any Cultured Stone texture. 800/255–1727. Cultured Stone Corporation, Napa, Calif.

CIRCLE 207

► Drier foundations



Styrofoam Perimate brand insulation offers both drainage protection and insulation for below-grade wall applications, reducing labor and material costs and helping eliminate the potential for mold and mildew. Perimate guides water down to weeping tiles, directing moisture way from foundation walls. The insulation is supplied in two-by-eight-foot boards to minimize job-site waste. 800/441–4369. The Dow Chemical Company, Midland, Mich. **CIRCLE 208**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



PHARO®

hansgrohe

The free standing Pharo Shower Column is in a class of its own – fabricated of anodized aluminum and shaped in an award-winning puristic design. The column offers completely new bathroom design options making it the choice of indiviualists. Like to see more?



www.hansgrohe-usa.com

For more information call Hansgrohe at 800 719-1000

CIRCLE 81 ON INQUIRY CARD

Residential Products

Blending with the landscape



▲ Give your landscape some structure

The Accent retaining wall system is ideal for many landscaping projects, including retaining walls and planting areas. Solid concrete units are lightweight, yet offer significant retaining-wall capabilities. Accent units permit tighter design radii and a smaller scale than their larger counterparts, and a unique pinning system allows construction of setback and near-vertical walls. 800/770–4525. Versa-Lok Retaining Wall Systems, Oakdale, Minn. **CIRCLE 209**

► Indoor/outdoor lounging



The Palazzio Collection of outdoor/indoor teak furniture includes a lounge chair (right) of plantation-grown, kiln-dried solid teak. All of the dining and occasional tables in the collection will be offered with either French Beaumaniere limestone (derived from ancient quarries), glass, or material supplied by the client. The limestone is specially coated with a transparent sealer to protect the tabletops without any alteration in color. 805/965–6535. Giati Designs Inc., Santa Barbara, Calif. **CIRCLE 210**

▼ Safe egress from the basement

Bilco's ScapeWEL window wells feature a terraced design step that attaches directly to the window buck or foundation for safe exit in an emergency. Unlike concrete window wells, ScapeWEL requires no forming or pouring, and it is faster and less expensive to install than a custom-terraced, site-built well. 203/934–6363. The Bilco Company, New Haven, Conn. **CIRCLE 211**



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



Go to your lumber yard for the floor system that gets a standing ovation

The professionals agree: sound control is one of the most important considerations for buyers of upscale condominiums. Builders from North Carolina to California have discovered that nothing deadens noise better in walls and floors than 440 Sound Barrier.

Lightweight, nailable and load-bearing, Sound Barrier can be installed in wall systems or directly under carpet pad, laminate floors and many other surface treatments. Unlike pumped-in concrete, it won't crack, break down or "dust up." Because it can be installed by the crew laying the floor or putting up the walls, in virtually any weather, Homasote installation won't delay construction. And with hundreds of units, this adds up to significant savings.

Superior sound deadening and lower installed cost are two reasons cited by the master condominium builders who specify 440 Sound Barrier, including Heritage Builders, Beaver Construction, Bostic Brothers and Simonini Custom Builders.

ENVIRONMENTALLY SAFE

Environmentally friendly

Homasote is made from 100% recycled paper, with no asbestos or urea formaldehyde – a major selling point with today's sophisticated consumer.

Proven to work in independent tests

The Homasote system is proven by NVLAP certified labs; Homasote is a fire-rated material approved by Underwriter Laboratories (UL and ULC approved for use in all L500 floor & ceiling assemblies per the 1999 Fire Resistance directory; call for details.)

For more information on Homasote 440 Sound Barrier, call 800-257-9491, or visit us at www.homasote.com

440 SOUND BARRIER™
Acoustical Control Systems
Sound Deadening That Will Floor You.™

homasote COMPANY
800.257.9491
www.homasote.com

CIRCLE 82 ON INQUIRY CARD



DESIGN AS HIGH OR AS WIDE AS YOU CAN DREAM...

With Strong, Lightweight and Durable Metal Wall and Cladding Systems

A complete palette of colors and finishes, textures and profiles for the most discriminating designers of high- and low-rise commercial, institutional and industrial buildings.

Contact the Metal Construction Association for some free thought-provoking ideas, technical literature, Merit Awards entry brochure and more information on MCA's Metal Wall Panel Council.

104 S. MICHIGAN AVE.
STE. 1500
CHICAGO, IL 60603
PHONE: 312-201-0193
FAX: 312-201-0214
www.mca1.org

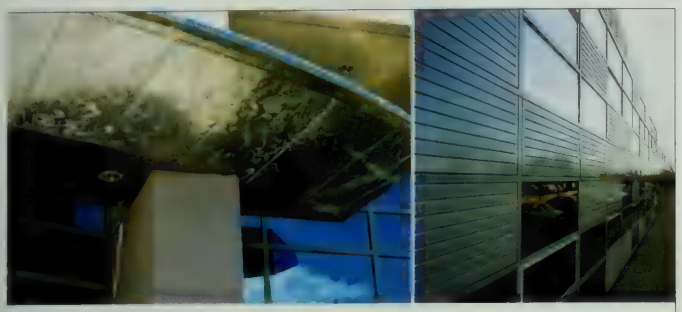


MCA
Metal Construction Association

CIRCLE 83 ON INQUIRY CARD

New Products

While metal cladding has been around for centuries, recently there has been a renewed interest in the material—partly as a result of the "Bilbao effect." Experts note an increasing willingness to explore the number of new textures and finishes available on everything from aluminum to zinc. Here are a few new metal cladding options. *Rita F. Catinella*



Finishes enhance metal cladding palette

A. Zahner Company's fabrication of the metal skin for Frank Gehry's design of the EMP [AUGUST 2000, page 126] is highlighted in this month's Technology section [page 173]. In addition to using the latest software and technology to fabricate metal panels such as those at EMP (the company has even developed its own design software), A. Zahner produces custom finishes and patinas either for new projects or historic/renovation work. It has even acquired the rights to several finishes.

Working in all available metal types (including cor-ten, bronze, stainless steel, and aluminum), the company recently produced over 45 different finishes on copper panels alone for various projects around the country.

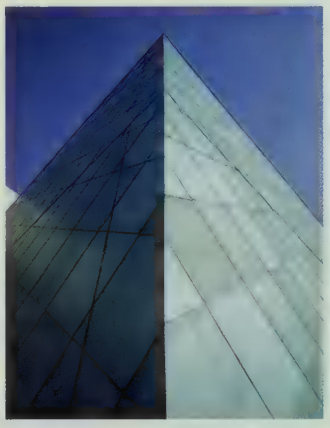
Along with the standard offerings, with the Meta-Bump, MetaPerf, and MetaShape lines, A. Zahner offers custom-embossed shapes and patterns in any size or spacing on any material.

A SuperPlastic aluminum MetaShape panel (above right) was fabricated recently for a project in England, while the Planet Hollywood restaurant in Orlando (above left) features a custom swirl finish on 2-millimeter-thick stainless steel. This is one of several finishes available on the full range of metals in the MetaMotif product line. 800/467–3125. A. Zahner Co., Kansas City, Mo. CIRCLE 212

Immediate copper patination



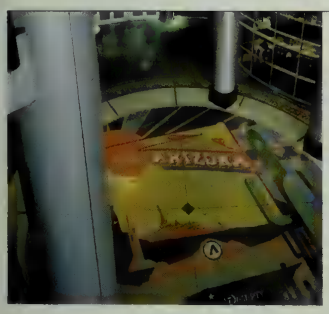
Not an acid-wash, spray-on paint, or an artificial coating of any kind, EverGreen prepatinated sheet copper (right) from Revere Copper Products gives architects and their clients the blue-green look of copper patination without the wait. As with all sheet copper, EverGreen's patina crystals form on the surface and transform to a copper hydroxide when exposed to moisture over time. Revere's proprietary manufacturing process duplicates and accelerates copper's natural aging, complete with the normal color variations and irregularities.



EverGreen was specified for Malden Mills in Lawrence, Mass.

Applications for EverGreen include roofing, sidewalls, fascias, mansards, spandrels, and hung-molded gutters. The product has been used in projects for the University of Iowa, Harvard University, and Malden Mills in Lawrence, Mass.

Care should be taken when using EverGreen in conjunction with mortar, cedar, and other materials capable of leaching acids that attack copper—which is still the most corrosion-resistant of all commonly used architectural metals. Also, runoff from iron and steel may adversely affect the patina. 800/448–1776. Revere Copper Products, Rome, N.Y. CIRCLE 213



Removable metal column covers

At the CSI show held this past June in Atlanta, Fry Reglet Corporation announced the addition of a new line of metal column covers: Series KS column covers provide a vertical butt joint, incorporating a key slot design for easy installation.

"Metal column covers with key slots provide unlimited removal and easy replacement," says Mac Hall, a partner at Fry Reglet. "These make it very easy to access electrical and mechanical items inside the columns. And you don't need any special tools."

The covers can be used on both interior and exterior applications, and they can be specified with a variety of heights, finishes, and gauge options (up to 14 gauge steel or .125 aluminum). The design of the key slot connections allows for flexibility in support methods. Installations can be accomplished by directly attaching the covers to the structure or by supporting them on standard drywall studs. 800/237–9773. Fry Reglet Architectural Metals, Alpharetta, Ga. CIRCLE 214

CLADDING OPTIONS:

Centria International Moon Township, Pa. 412/299–8240.

Permasteelisa Hartford, Conn. 860/253–4485.

Pohl, Inc. Marblehead, Mass. 617/639–2662.

Porcelain Enamel Institute Nashville. 615/385–5357.

Timet Lawrence, Kans. 785/842–2299.

Rimex Metals (USA), Inc. Edison, N.J. 800/526–7600.

New Products



▲ Unsinkable zinc

Rheinzink's System-A architectural modular zinc wall-panel system utilizes advanced dry seal, pressure-equalized rainscreen technology. Rheinzink is a solid, titanium zinc alloy that develops a blue-gray patina and has a potential life span of over 100 years. The system can be applied for curtain walls, spandrel panels, fascias, soffits, column and beam covers, canopies, and signage. The system was specified for the Coal Harbour Towers (above), two residential towers in Vancouver. The entire exterior skin uses the rainscreen principle to resist the wet Vancouver weather. 617/948–2520. Rheinzink Canada Ltd., Boston. **CIRCLE 215**



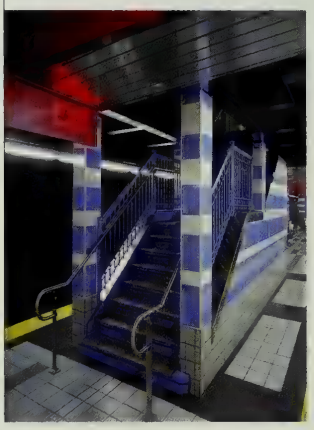


▲ Aluminum exterior cladding

Alucobond material, made of two sheets of .02-inch aluminum bonded to a proprietary plastic core, can be specified for a variety of residential or commercial applications. Approximately 60,000 square feet of the aluminum composite material was used on the Conservatory, an upscale condominium project in Vancouver (above right). The material was attached to the upper stories in ■ dry-joint, rainscreen, pressurized panel system. The exterior of the new air terminal at the City of Midland, Texas (above left), combines brick, precast concrete, blue-green glass, and silver metallic Alucobond material. 270/527–4200. Alusuisse Composites Inc., Benton, Ky. **CIRCLE 218**

▼ Ceramic steel

Polyvision is a producer of light-gauge Ceramicsteel products. Uses include interior partitions, abuse-resistant signage, and architectural panels. Ceramicsteel is produced by fusing ceramic or porcelain materials to steel at high temperatures. Ceramicsteel panels are graffiti-proof, and scratch-, stain-, acid-, heat-, and fire-resistant. Prescreened graphics will not fade. 918/756–7392. Polyvision Corporation, Okmulgee, Okla. **CIRCLE 216**





▲ Good bone structure

The "T-24" industrial rib panel features 3-inch depth and 12-inch pitch, creating a deep-ribbed look with pronounced shadow lines and increased span capabilities. The panel is available in galvanized steel, zinc, aluminum-coated steel, or aluminum, and a full range of colors and coating systems. 909/829–8618. Custom Panel Industries LLC, Rancho Cucamonga, Calif. **CIRCLE 217**



▼ Metal wall-panel system helps to achieve the American dream

The U.S. Immigration & Naturalization Service (INS) challenged HDR Architecture, of Alexandria, Va., to design, within a few months, a plant in eastern Kentucky for the manufacture of permanent-resident "green" cards. The project was the first new facility built specifically for the card-production process. Butler Manufacturing Company provided the structural framing, two different types of standing-seam metal roof systems, and a basic metal wall-panel system. 816/968–3525. Butler Manufacturing Company, Kansas City, Mo. **CIRCLE 219**



Designing with copper?



Omnicom Group, Venice, Calif.
Frank O. Gehry & Associates



Ecolab Corporation, Illuminating, Minn.
Hammel Green and Abrahamson, Inc.



Phoenix Central Library, Phoenix, Ariz.
bruderDWLarchitects

You're not alone.

You've got the Copper Development Association by your side. Our *Copper in Architecture* program has all the information and technical assistance you want.

Want design details and specifications? The *Design Handbook* has them for virtually every application. They're available in hard copy on CD-ROM and in AutoCAD® files. Want to learn about copper roofing? Our 30-part videotape has loads of information on forms, shapes and details. We even have a 72-minute video



installation guide for contractors. Need to earn continuing education units? We offer AIA accredited seminar and self-study programs that explore design fundamentals, techniques and installation. Plus, you have access to our technical databases, training programs and listings for manufacturers, local suppliers and contractors.

Want to design with the material that helps the world's most famous architects stand out from the crowd? We'll stand beside you. Call **888-427-2411** or visit us at ***http://architecture.copper.org*** today.

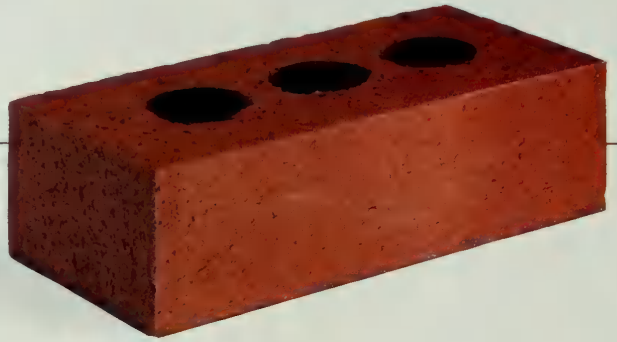
COPPER

Unique. Beautiful. Enduring.

CIRCLE 84 ON INQUIRY CARD

Sixty second guide to Belden Brick:

COLORS



Belden Brick is made in over 116 colors that include 2 choices in black, 28 browns, 7 tans, 8 buffs, 3 creams, 18 grays, 16 pinks, 26 reds, and 8 whites.

In addition, it is made in 12 different textures, although not all our brick is made in the same range of textures.

Belden also offers a choice of extruded brick or molded brick (with the character of hand-made brick.) Each category includes a wide range of colors and textures providing more than adequate design latitude.

SIZES



Belden Brick is predominantly made in thirteen different sizes, representing the spectrum of Belden Brick colors and textures. Your design opportunities are broadened by the availability of virtually every Belden Brick color choice as pavers.

SHAPES



We've made hundreds of different shapes to provide special structure details, and a week seldom passes without our custom-making a new special shape to meet individual design requirements. If you need an "impossible" special shape to complement the brick structure you're planning, call Belden. We've seen the impossible become reality.

CIRCLE 85 ON INQUIRY CARD

BELDEN

THE BELDEN BRICK COMPANY

(330) 456-0031
An ISO 9002 Registered Company
Canton, Ohio 44701-0910

Product Briefs



▲ On the Wright block

The Museum Block Set is part of the Frank Lloyd Wright Collection of wooden blocks from T.C. Timber. This 54-piece hardwood maple block set comes housed in a wooden box, and the slate cover serves as the city street. Also included in the series is the Prairie House Block Set, which comes with 70 hardwood maple pieces and is inspired by works such as the Frederick Robie House. Nature Pattern Blocks, a set of 110 geometric shapes, teaches how to use Wright's principles of nature patterns. 800/468–6873. T.C. Timber, Skaneateles, N.Y. **CIRCLE 220**

► Hall of windows

Wausau manufactured six curtain-wall systems, ornamental aluminum covering for the exterior overhang, and dozens of support columns both inside and outside of the Anaheim Convention Center. The column covers are made of two curved aluminum shells that connect around the towering posts to hide the steel underneath. Wausau worked with a team of experts to develop several proprietary window systems for HOK's design. 877/678–2983. Wausau Window and Wall Systems, Wausau, Wis. **CIRCLE 221**





◄ Concrete countertops

The five models in the Geocrete Pelago series of cast-concrete countertops take advantage of the sculptural quality of the material and may include elevation changes, sloped surfaces, cast-in drain channels, or inlaid objects and artifacts. The countertops are available in six colors and two finishes. 510/549–2805. Cheng Design Products Inc., Berkeley, Calif. **CIRCLE 222**

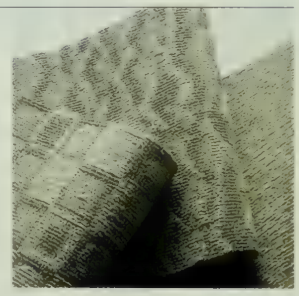
► New generation of seating

Fairbanks is the newest Arts and Crafts–inspired seating from the Generation series of KT Furniture's HumanCare line. Fairbanks features a wider arm for a feeling of stability, an 8 percent pitch on the inner side of each arm to ease circulation, and lumbar support to provide comfort for long periods of sitting. Fairbanks is available with an upholstered or wood back. 800/323–1030. KT Furniture, Gardena, Calif. **CIRCLE 223**



► Latin patterns

Bolyü introduces the Iberian Peninsula Collection of coordinating inner-loop scroll patterns, inspired by the cultures of Spain and Portugal. Patterns such as Belem, Medina, and Azores (shown) recall vines, Moorish window screens, or volcanic cliffs, and come in 19 colorways. 800/451–1250. Bolyü Contract, Adairsville, Ga. **CIRCLE 224**





◄ Storage for objects or people ►

Clic (left) is a modular display and space system from Burckhardt Leitner that uses magnets to connect components with a soft click. The structure is based on a grid system that can be configured with shelving, storage panels, lighting, and other accessories, making it ideal for exhibitions, retail displays, offices, and the home. The Lit Clos bed compartment (right), from Cappellini, features varnished steel legs in two heights, a steel frame, and panels in bent, lacquered birch plywood. An aluminum grille, translucent resin door, wooden floor with a cellulose carpet, and a fabric ceiling complete the structure. 305/437–7975. Luminaire, Miami. **CIRCLE 225**

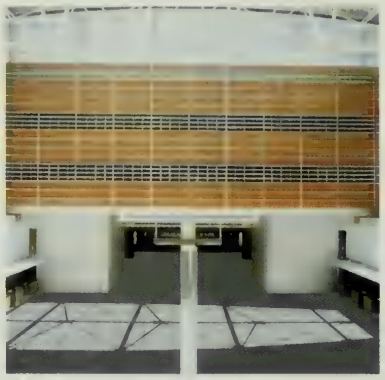


Product Briefs

▼ Low-contrast healthcare flooring

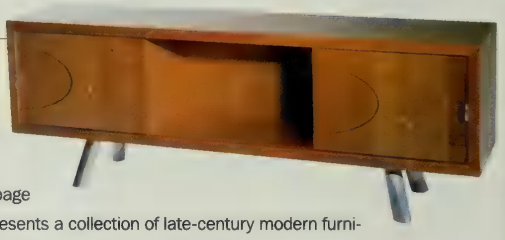
Created specifically for the visual and performance demands of operating rooms, Mannington Assurance Low Contrast slip-retardant flooring, by Mannington Commercial, comes in five colors. The low-contrast visual reduces eyestrain for medical staff and provides a monolithic background that makes it easier to see dropped objects. Available in six-foot widths, Mannington Assurance may be chemical- or heat-welded and exceeds the ADA-recommended static coefficient of fraction for accessible routes. Mannington Assurance Low Contrast is the newest product in the company's LifeCare line, developed to address the specific needs of various healthcare environments. 800/241–2262. Mannington Commercial, Salem, N.J. **CIRCLE 226**





◄ Bon voyage

San Francisco Airport has unveiled a 21,000-square-foot cherrywood wall over the ticket counters in the new International Terminal. Made entirely from wood veneer, the 670-by-38-foot wall comprises 956 individual panels and has been certified as environmentally friendly by the Forest Stewardship Council. 202/342–0413. Forest Stewardship Council U.S., Washington, D.C. **CIRCLE 227**



► Late and modern

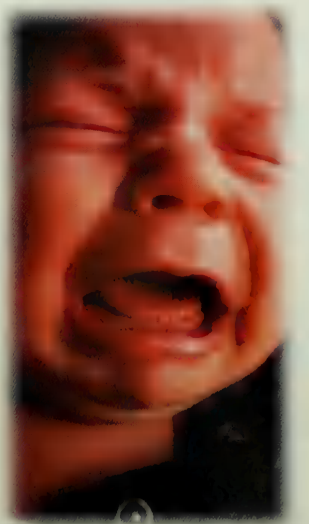
As a complement to the State of Mind rug collection [JULY 1999, page 161], Angela Adams presents a collection of late-century modern furniture by Sherwood Hamill. The series includes a bench with a matching stool, coffee tables, a workstation, and a work table. The pieces are made from a variety of materials, including walnut, ultrasuede, and brushed aluminum. The side case (above) features a fully finished back and sliding doors of quartersawn cherry with brushed aluminum legs and hardware. 800/255–9454. Angela Adams, Portland, Maine. **CIRCLE 228**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

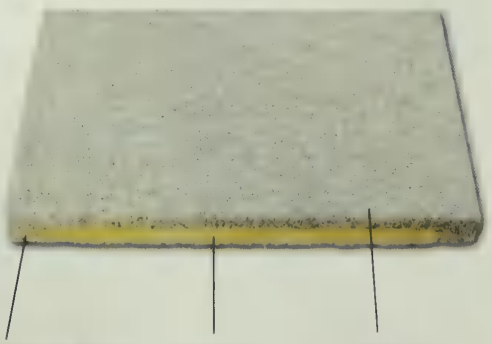
Spec a sound system to rival theirs

TECTUM Finalé wall system installs easily and controls noise

Their sound system



TECTUM Finalé Wall System



Furring strips built-in so Finalé just fastens into place

Sound-absorbing inner core for added noise control

Impact-resistant high-NRC TECTUM panels are proven tough

TECTUM Finalé wall panels install so easily and look so good, you'll wonder why you waited to reduce noise levels in your building. Finalé comes with furring strips and a sound-absorbing inner core already installed. And it resists repeated impacts as well as other forms of abuse.

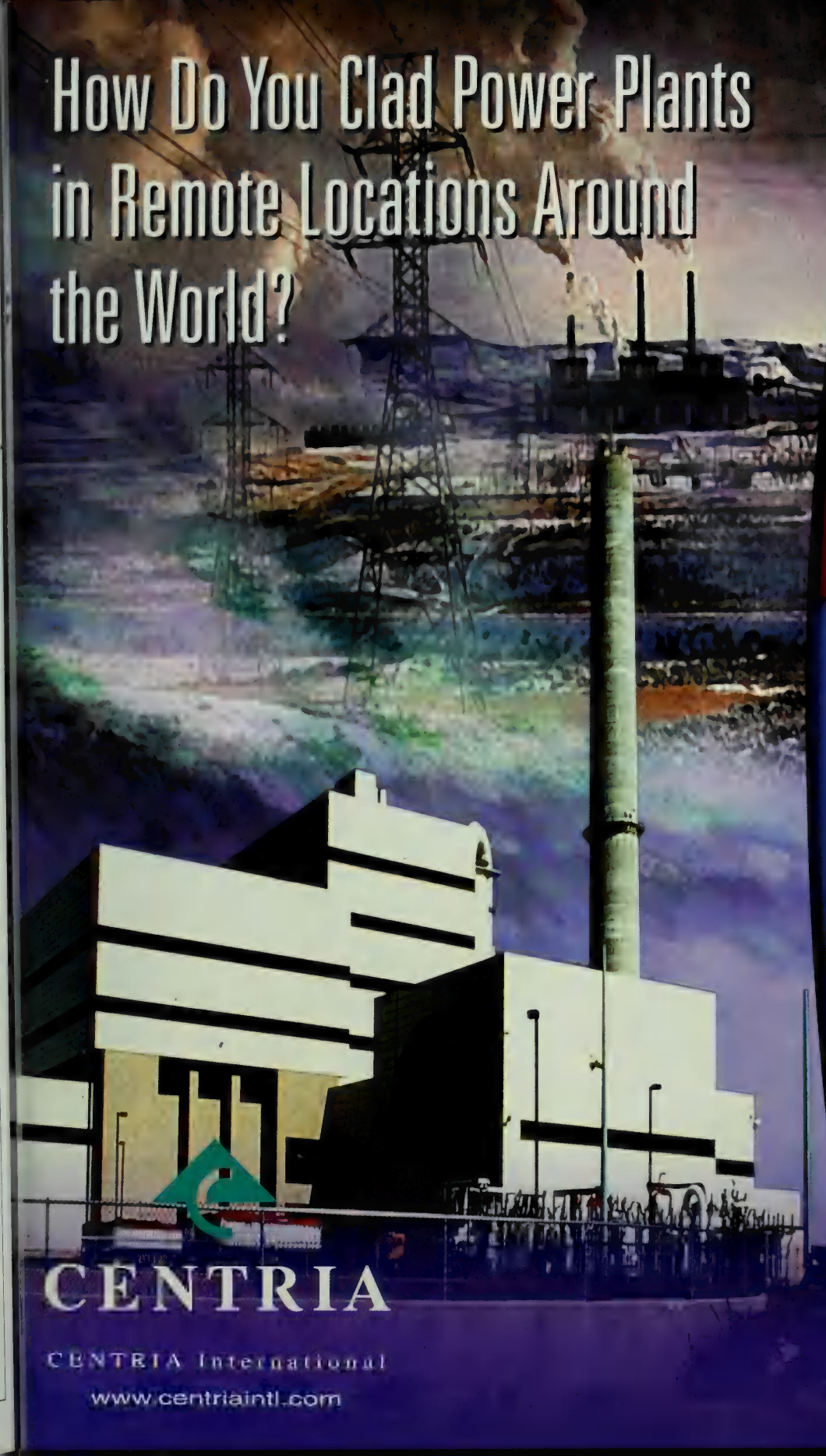
Call today or visit our web site for more information on Finalé and other proven TECTUM acoustical products.

TECTUM INC. Since 1949

The Architect's Advantage

888-977-9691
www.tectum.com

CIRCLE 86 ON INQUIRY CARD



How Do You Clad Power Plants in Remote Locations Around the World?

Ask CENTRIA International

Not all building projects are in easily accessible areas. That's why there's CENTRIA International. We offer products management, technical support and project supervision anywhere in the world – even the most difficult to reach locations.

Plus, CENTRIA International offers:

- *Customized architectural and engineering support for every phase of a project*
- *High performance wall and roof systems for both environmental and structural challenges*
- *A wide variety of building products for virtually any aesthetic requirement*

Call for advice.
CENTRIA International Headquarters
Phone: +1-412-299-8000
Fax: +1-412-299-8053
e-mail:
info@centriaintl.com

CIRCLE 87 ON INQUIRY CARD

CENTRIA

CENTRIA International

www.centriaintl.com

Product Briefs



◄ Glory days

School lockers have been salvaged from auctions and demolition sites and given a new life by Sonrisa. The lockers can serve many functions, including toy storage or office organizers. Available in a range of sizes and formats, the lockers can also be re-enameled in mod colors if desired. 800/668–1020. Sonrisa Furniture, Los Angeles. **CIRCLE 229**

► Laminate for the ladies room

ThickLam laminate from Nevamar is designed for a variety of high-use applications, including toilet partitions, rest-room compartments, door/frame systems, and door plates. Moisture-resistant ThickLam is stocked in ½- and ¼-inch thicknesses, and 5-by-10-foot and 5-by-12-foot panels. 800/638–4380. International Paper, Decorative Products Division, Odenton, Md. **CIRCLE 230**







▲ Building with steel

By using light-gauge, cold-formed steel framing components and panels, the owners, architect/engineer, general contractor, and steel fabricator of the Atlantic Shores Retirement Community in Virginia Beach were able to increase the height and usable square footage of the building by 50 percent, to employ a noncombustible material, and to build a structure able to withstand winds up to 110 miles per hour. The senior-living facility is located in a hurricane-prone area only a mile away from the Atlantic Ocean. 202/452–7100. American Iron and Steel Institute, Washington, D.C. **CIRCLE 231**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



Another
DRAINAGE
SOLUTION
by Mortar Net™

Mortar Net™ Block's **patented** shaped mortar dropping collection device prevents water damage in single wythe concrete masonry unit (CMU) walls by breaking up mortar, thereby allowing proper drainage to the weep holes. To ensure optimum performance of concrete masonry walls, specify Mortar Net™ Block.

800-664-6638 www.mortarnet.com

Mortar Net™
The Difference Is In *The Cut*

CIRCLE 88 ON INQUIRY CARD

FOLLANSBEE® ENVIROMETALS®
TCS II® and TERNE II®









versatile roofing metals coated with a new environmentally-friendly alloy

FOLLANSBEE®

FOLLANSBEE STEEL • FOLLANSBEE, WV 26037
Call us toll-free 1-800-624-6906

CIRCLE 89 ON INQUIRY CARD

Visit us on the Website:
follansbeeroofing.com

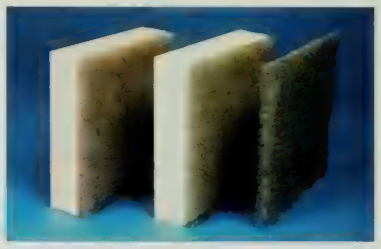
Our E-Mail address:
folrfg@ibcorp.com

Product Briefs

▼ Smashing design

George Papadopoulos cracks and smashes glass panels to create screens, partitions, and flooring that define space through light. Papadopoulos uses industrial and commercial laminating processes to produce glass for both domestic and public spaces. Last October he created two panels of laminated, shattered frosted glass for a temporary exhibition of contemporary jewelry for a jeweler in London (below). From October 5–8 he will be exhibiting at 100% Design, a trade show held in London. +44/020 8885 2029. Yorgos Architectural Glass, London. **CIRCLE 232**



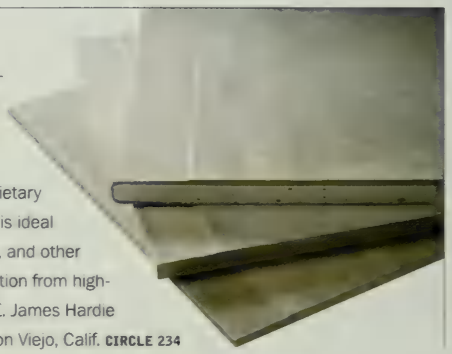


▲ Avoid drain pains

CavClear masonry mat and insulation systems are intended to provide proper drainage and adequate ventilation within masonry walls. The masonry mat is made of fluid-conducting, nonabsorbent, mold- and mildew-resistant polymer mesh recycled from 100 percent postconsumer plastic. The insulation system includes the masonry mat bonded to extruded foam board insulation. CavClear claims that the products eliminate drainage and ventilation problems. 888/436–2620. CavClear/Archovations Inc., Hudson, Wis. **CIRCLE 233**

► Stop the abuse

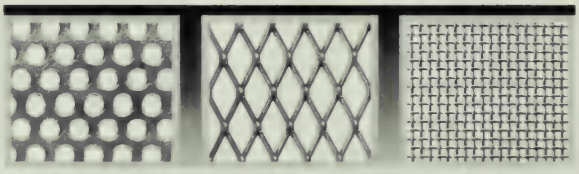
Titan Panel FR is a new fiber-cement, fire-rated abuse- and impact-resistant panel. The panel has a fiber-cement surface with a proprietary fire-rated gypsum base that is ideal for schools, hotels, hospitals, and other applications requiring protection from high-traffic abuse. 800/9-HARDIE. James Hardie Building Products Inc., Mission Viejo, Calif. **CIRCLE 234**



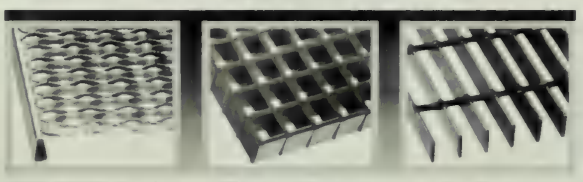
For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

McNICHOLS®

Hole Products!



Perforated Metal | Expanded Metal | Wire Cloth



GRIP STRUT® Grating | Fiberglass Grating | Bar Grating

Complete Hole Product inventories are available from Service Centers coast to coast in a variety of styles, sizes and materials.

The Hole Story® Since 1952

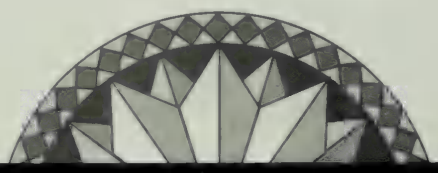
We can custom fabricate to meet your specifications. What you want– when you need it in 24 hours or less. Call "The Hole Story" today.

1-800-237-3820

McNICHOLS CO.

www.mcnichols.com

CIRCLE 90 ON INQUIRY CARD



Welcome to the New Stone Age

For member referrals, technical information and help finding sources of stone, call (614) 228-6194. It's your gateway to the New Stone Age.

Marble Granite Slate | Onyx Travertine Limestone | Sandstone Quartzite

The Marble Institute of America, Inc.

614-228-6194

Fax: 614-461-1497

http://www.marble-institute.com

CIRCLE 91 ON INQUIRY CARD

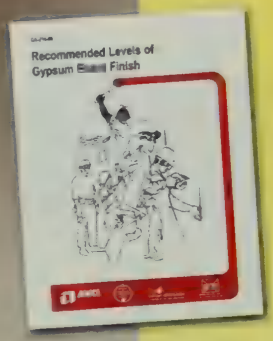
Where Do You Specify a LEVEL 5 Gypsum Board Finish?

- *Where Critical Lighting Conditions Occur*
- *Where Gloss, Semi-gloss, Enamel, or Non-textured Paints are Specified*



North Oakland Medical Centers
Emergency Room Renovation
Pontiac, Michigan

Gunn Levine Associates
Detroit, Michigan



Find out more . . .

GA-214-96, *Recommended Levels of Gypsum Board Finish,* educates architects and specifiers on the various levels of finish of gypsum board surfaces prior to the application of specific types of final decoration. This industry-wide consensus document ensures project plans can be written in specific terms so architects, contractors, and owners can best anticipate the final appearance of the decorated wall and ceiling system.

To learn more about GA-214-96, *Recommended Levels of Gypsum Board Finish,* contact the Gypsum Association or any of its member companies.

GA-214-96 is available for downloading FREE from the Gypsum Association at www.gypsum.org.

Earn **one Learning Unit hour that qualifies as an HSW hour** by studying the Levels of Finish on CD-ROM.

CONTINUING EDUCATION AIA

For details visit the Gypsum Association online.

GYPSUM ASSOCIATION MEMBERS

American Gypsum
Celotex Corporation
Continental Gypsum Company
G-P Gypsum Corporation
James Hardie Gypsum
Lafarge Gypsum
National Gypsum Company
PABCO Gypsum
A Division of Pacific Coast Building Products, Inc.
Republic Gypsum Company
Temple-Inland Forest Products Corp.
United States Gypsum Company
Westroc Inc.

GYPSUM ASSOCIATION

GYPSUM ASSOCIATION
810 First Street NE, #510
Washington, DC 20002
Phone: 202-289-5440
Fax: 202-289-3707
www.gypsum.org

CIRCLE 92 ON INQUIRY CARD

Product Briefs



▲ Handy tiles

The Handmold series by Seneca Tiles makes use of a blend of local clays, incorporating techniques developed hundreds of years ago: craftsmen beat handfuls of plastic clay into shallow wooden molds, scrape the excess clay from the top, place a wooden drying board over the mold, and then lift the mold. The tiles are then dried, glazed, and fired under carefully controlled conditions. Evergreen (shown) is part of the Renaissance series of highly variegated glazes exhibiting a combination of matte, stonelike finishes with random areas of gloss. 800/426–4335. Seneca Tiles, Inc., Attica, Ohio. **CIRCLE 235**



► Flip it up

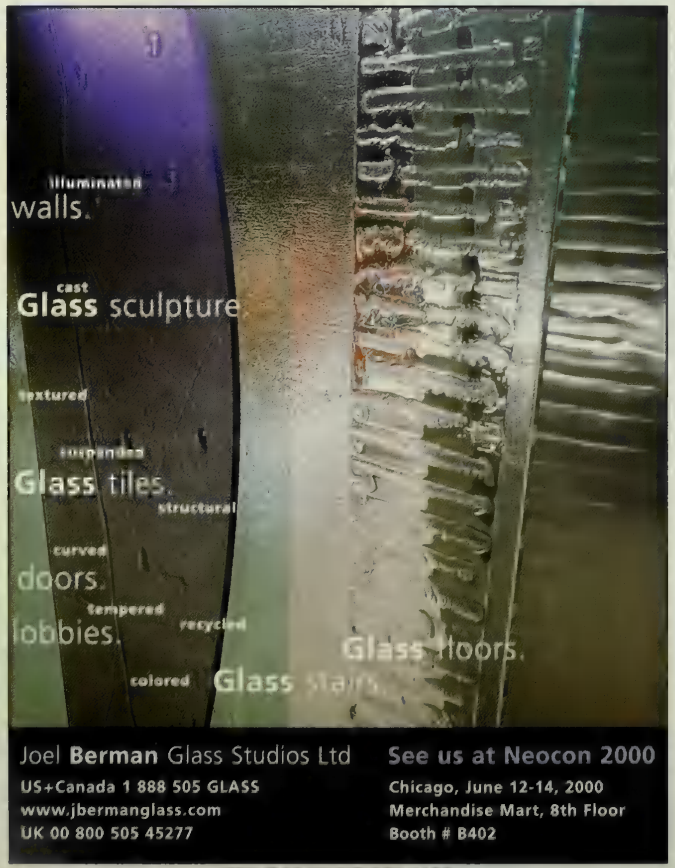
Designed by Giancarlo Piretti, Torsion on the Go is a lightweight, flex-back, four-leg alternative to traditional pedestal seating. With flip-up seat castors, chairs can nest together, then be quickly rolled away for storage. Backs are available with upholstery or in dimpled black or warm gray polypropylene. Torsion's steel-tube frames can be ordered chrome-plated or in KI's standard powder-coated finishes. Versions with or without arms are offered. 800/424–2432. KI, Green Bay, Wis. **CIRCLE 236**



◄ Bounce right back

PlayFlex is a urethane binder used in combination with granulated or shredded rubber to produce a permeable, soft surface. The product permanently binds the rubber particles into a cushioned blanket of protection for playgrounds, walking paths, or work areas. It can be spray-applied or machine/hand-applied. 314/521–4100. Futura Coatings Inc., St. Louis, Mo. **CIRCLE 237**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



CIRCLE 93 ON INQUIRY CARD

110 VOLT GROMMET!



Our new "PCS" line of grommets brings power and data right to your desktop with electrical outlets and data ports.

"PCS1" is 4" overall and goes into a 3½" hole. U.L. Listed and C.U.L. Listed. US Patent# 6,024,599, other patents pending.

In stock for immediate shipping in Black and Light Grey, custom colors available.

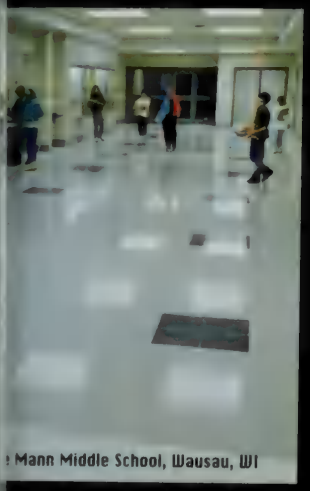
See dozens of other wire access grommets and wire management systems in our new 2000 color catalog.

Doug Mockett & Company, Inc.
"Fine Architectural Hardware for Your Fine Furniture"®
Box 3333 ▪ Manhattan Beach, CA 90266 USA
Tel: 310-318-2491 • FAX: 310-376-7650
Visit us on the Internet at www.mockett.com

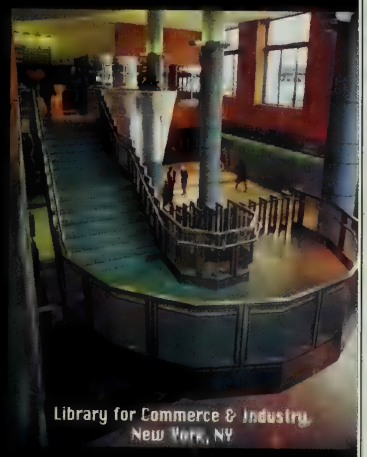
CIRCLE 94 ON INQUIRY CARD

Read any good books lately?
Chances are you walked all over us ...

Wausau Tile


Mann Middle School, Wausau, WI


University of Illinois, Champagne, IL


Library for Commerce & Industry, New York, NY

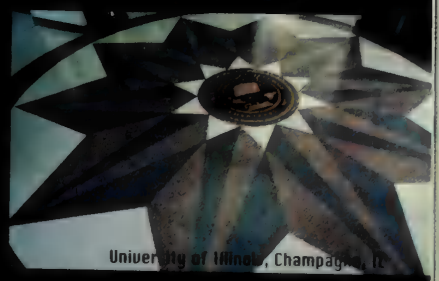

Washington Library, Chicago, IL


Harold Washington Library, Chicago, IL

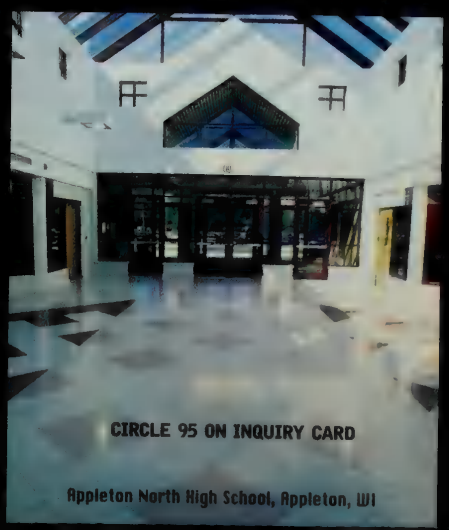

ersity of Illinois, Champagne, IL

... and we love it!

Terrazzo Tile
and
Precast Terrazzo


Univer ty of Illinois, Champaign, IL

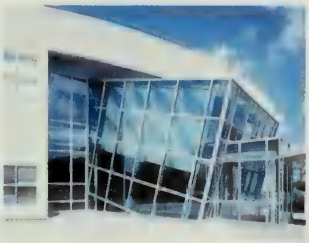

University of Illinois, Champagne, IL


CIRCLE 95 ON INQUIRY CARD

Appleton North High School, Appleton, WI

Wausau Tile
P.O. Box 1528
Wausau, WI 54402-1528
800-388-8728
Fax 715-359-7456
www.wausautile.com

Product Briefs



▲ Making an entrance
To create a curving curtain wall for Fore Systems in Marshall Township, Penn., Studios Architecture and Perfido Weiskopf Architecture used Vistawall's HP-400 window system and CW-250 curtain wall. Side-stacked in the ribbon wall, the window system is modified to segment at each vertical, allowing a variable degree of splay for both an inside and outside arc. Thus, the windows curve with the building. 800/869–4561. Vistawall Architectural Products, Terrell, Tex. **CIRCLE 238**

▼ Classical inspiration
Ancient Greece inspired Mark Goetz in his design for the Esperanto chair for Bernhardt (below). The solid maple chair features a large down cushion and low, deep seat. Claris, a modular seating group also designed by Goetz, comes with an optional raffia frame. To unify the group, Goetz created a profile that could be used as both an arm and a back. 212/888–3232. Bernhardt Design, New York City. **CIRCLE 239**





▲ Palette by nature
Accordia, designed by Dina Frank and Alan Dandron, features wood, metal, and glass work surfaces that float on metal pins; metal legs raise the entire system off the floor. The designers selected a new palette of natural, finished veneer combinations ranging from the lighter sycamore and anigre to darker sapele and pommele. A lockable, hinged panel on the worksurface opens to a storage area for laptops. 507/533–4235. Halcon, Stewartville, Minn. **CIRCLE 240**

► Gain more control
Instead of installing separate reader devices, electrified strikes, door contacts, and request-to-exit devices, users can install the Best IDH Max lockset, which combines multiple control-access functions in a single device. The lockset is available for Grade 1 cylindrical and mortise lock installations with a variety of levers, knob styles, and finishes. It can utilize magnetic strip, keypad, or proximity reader devices. 317/849–2250. Best Access Systems, Indianapolis. **CIRCLE 241**



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



CIRCLE 97 ON INQUIRY CARD



form
and function

The new AF3P auto-lock hook combining the convenience of the self-arresting Arakawa Gripper™ with the security of a carabiner-like spring to effectively secure your art

Hang the AF3P from a cable on our wall-mounted rail, and you have an attractive system to quickly position art anywhere on the wall

And you won't have to patch and paint any more nail holes

toll free Call us today.
888.ARAKAWA

ARAKAWA HANGING SYSTEMS
1020 SE Harrison Portland, Oregon 97214 www.arakawagrip.com

CIRCLE 96 ON INQUIRY CARD





This cast glass corporate sign is one of the most visible landmarks in downtown Vancouver. The panels are cast in a 3/4" thick tempered safety glass, range up to 7' tall, and span two 30' lengths of bent stainless steel tubing. The aluminum letters are 1/2" thick and pinned through the glass. Letters & logo are powder coated, and all items are illuminated at night with water sealed halogen lights, one positioned below every letter. Nathan Allan provided all materials and installation for this project.



Nathan Allan
Glass Studios Inc.

Suite 118 · 11180 Coppersmith Place, Richmond, BC Canada V7A 5G8
Telephone 604/277.8533 · Facsimile 604/277.1515 · Website www.nathanallan.com

Photography by Action Images (Vancouver, BC)

CIRCLE 98 ON INQUIRY CARD



Modern Masters of Architectural Timbers

The G.R. Plume Company sets the standard for integrating the beauty of natural wood into today's architecture. Our masterful architectural timbers grace distinctive homes and businesses around the world. We provide beautiful and ingenious solutions, insightful collaborations, and a thorough understanding of wood and its applications. Our twenty years of creative and technical woodworking expertise can help you realize your architectural vision. For more information,

call (360) 384-2800.



THE G.R. PLUME COMPANY
ARCHITECTURAL TIMBER DIVISION

CIRCLE 99 ON INQUIRY CARD

Product Literature

Fabric primer

A new primer on Xorel fabric from Carnegie focuses on the aesthetics, function, and sustainability of the product. A handy pull-out specifications card and sample card are stored in a pocket at the back of the primer. 800/727–6770. Carnegie, Rockville Center, N.Y. CIRCLE 242

Glass facts

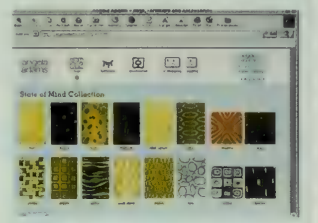
Three new laminated glass fact sheets from the North American Laminated Glass Information Center focus on the product's role in increasing sound control and earthquake protection for buildings and in promoting safety in schools. 800/230–4527. Laminated Glass Information Center, St. Louis. CIRCLE 243

Commercial windows catalog

The 212-page *Andersen 2000 Commercial Catalog* showcases Andersen casement, awning, speciality, double-hung, gliding, and skylight/roof windows, doors, and joining/combination designs. Each section has size charts, product features, and options, as well as basic unit details. 800/426–7691, ext. 1899. Andersen Commercial Group, Bayport, Minn. CIRCLE 244

NEW SITES FOR CYBERSURFING

Rug, furniture, and accessory e-commerce site **www.angelaadams.com**



Free site for sourcing design products and services **www.specsimple.com**

Guide to Resource Efficient Building Elements **www.crbt.org**

Business-to-business lighting product information **www.waclighting.com**

Fine furnishings resource for design trade only **www.designonlineinc.com**

Tips for hardwood

"Pre-Finished vs. Site-Finished" is part of the *Tips & Techniques* series from the Hardwood Council. The literature provides helpful information for choosing on-site or factory finishes, as well as a step-by-step guide to on-site finishing. "Specialty Finishing of Hardwoods", another installation, includes guidelines on designing with finishes using bleaching, antiquing, pickling, and coloring. 412/281–4980. The Hardwood Council, Oakmont, Pa. CIRCLE 245



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

See it. Feel it. Change it!

www.3D-WIN.com



Architect: GRUZEN SAMTON

3D WIN

3D ARCHITECTURAL RENDERING
3D ANIMATION
PRESENTATION BOARD GRAPHICS

1270 Broadway, Suite 409, New York, NY 10001
Tel 1. 212. 695. 5007 Fax 1. 212. 695. 5010

CIRCLE 101 ON INQUIRY CARD

OFFICIAL COURT NOTICE

TO ALL PERSONS, OR THEIR PROPER ASSIGNEES, WHO OWN BUILDINGS IN THE UNITED STATES ON WHICH PHENOLIC FOAM ROOFING INSULATION ("PFRI") MANUFACTURED BY KOPPERS COMPANY (NOW KNOWN AS BEAZER EAST, INC.) OR JOHNS MANVILLE CORPORATION AND JOHNS MANVILLE INTERNATIONAL IS INSTALLED OVER A METAL ROOF DECK, OR WHO HAVE A PROPERTY INTEREST IN SUCH BUILDINGS WHICH OBLIGATES THEM TO MAINTAIN THE BUILDING'S ROOFING SYSTEM

Notice is hereby given that settlements have been reached in the class action lawsuit entitled Sebago, Inc. et al. v. Beazer East, Inc., et al., Nos. 96-10069-MLW and 96-10656MLW (United States District Court, District of Massachusetts), two settlement classes have been conditionally certified and preliminary approval of the settlements has been granted by the District Court. **The settlements will provide compensation to persons who own, or are obligated to maintain the roofing system, of buildings with Phenolic Foam Roof Insulation ("PFRI"). Koppers Co. n/k/a Beazer East, Inc. manufactured PFRI from 1980 through January 17, 1989 under the names Koppers Exeltherm Xtra and Rx, Genstar, Pittsburgh-Corning or Loadmaster ("Beazer PFRI"). Johns Manville and Schuller International manufactured and sold PFRI from January 18, 1989 through December 31, 1992 under the names "Ultragard Premier," "InsulBase Premier," and "Fesco-Foam Board" ("JM PFRI").** The settlements will be considered for approval at a Fairness Hearing scheduled by the Court for December 13, 2000.

You may be a member of one of the settlement classes if you own, or are obligated to maintain the roofing system, of a building or other structure in the United States or its territories and possessions in which Beazer PFRI or JM PFRI is currently installed within a roofing system and above a metal roof deck as of June 30, 2000, the date of the court's order preliminarily approving the settlements. The following persons are not included in the settlement classes: (a) persons who properly execute and timely file a request for exclusion from the settlement classes in accordance with the terms of the Settlement Agreements, and (b) persons whose roof decks are entirely non-metal; and (c) persons whose roof deck was fully remediated or whose claims relating to Beazer PFRI or JM PFRI were previously settled by Beazer or Johns Manville. Under the settlements, persons whose membrane system is entirely comprised of a metal roof system are not included in the settlement class.

This Notice Is Only A Summary. There are more detailed written settlement notices which explain the terms of each settlement and your right to participate, object or exclude yourself from the settlement classes.

If you think you may be a member of one of the settlement classes and you did not receive a written settlement notice by mail, you should request a copy of the appropriate notice by contacting the Notice Administrator by mail or telephone as follows:

Phenolic Foam Roof Insulation Litigation
c/o Standish Legal Processing
Stonehill Corporate Center
999 Broadway, Suite 500
Saugus, MA 01906

1-877-917-PFRI

www.pfriclaims.com

The written settlement notices include Claim Forms, Requests for Exclusion and Instructions on how to opt-out of the settlements and other information.

If you are a member of the Settlement Classes and do not opt out of the Settlements by November 22, 2000, you will be entitled to participate in the Settlement Claims Program and will be bound by the Court's Judgments in this Action.

PLEASE DO NOT CONTACT THE COURT

CIRCLE 102 ON INQUIRY CARD

Product Literature

Color visualization software

Color@Home software, developed by The Glidden Company, lets consumers visualize how different color combinations will look before they paint. Color@Home features five styles of homes and 27 different interior rooms. Users can select any of the exteriors or rooms and see how they look with different color combinations. 440/331–3832. Glidden, Cleveland. **CIRCLE 246**

Ventilation overview

Ventilation, Solutions for Your Home is a booklet explaining how ventilation contributes in creating healthy living environments. It also highlights areas of the home where ventilation is needed and reviews some of the products available to solve a home's ventilation needs. 847/394–0150. Home Ventilating Institute, Arlington Heights, Ill. **CIRCLE 247**

Metal coating color guide

Alusuisse Composites has introduced a new color guide of paint chip samples from a wide range of colors and finishes for use in selecting Alucobond material colors and finishes. A special "coatings reference" page provides information including: architectural and corporate identity suitability; usage in various types of environments; gloss, metallic, graffiti and abrasion considerations; and performance standards. 800/382–6445. Alusuisse Composites Inc., Benton, Ky. **CIRCLE 248**

Laminate profile

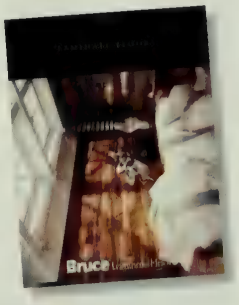
A new brochure from Bruce Laminate Floors features the styles and benefits of the company's three brands: Traffic Zone, Carnival, and Value Zone. 214/887–2100. Bruce Laminate Floors, Addison, Tex. **CIRCLE 249**

Fiber cabling system catalog

Krone Inc.'s new catalog features a complete portfolio of fiber optic cables, connectors, patchcords, adapters, modular panels, patch panels, hardware, and accessories for campus, building, and horizontal/closet distribution. 800/775–5766. Krone Inc., Arlington Heights, Ill. **CIRCLE 250**

Fabric duct design guide

KE Fibertec has released its new product binder, containing a design guide for its fabric duct ventilation systems. 877/229–0695. KE Fibertec NA, Oro Valley, Ariz. **CIRCLE 251**





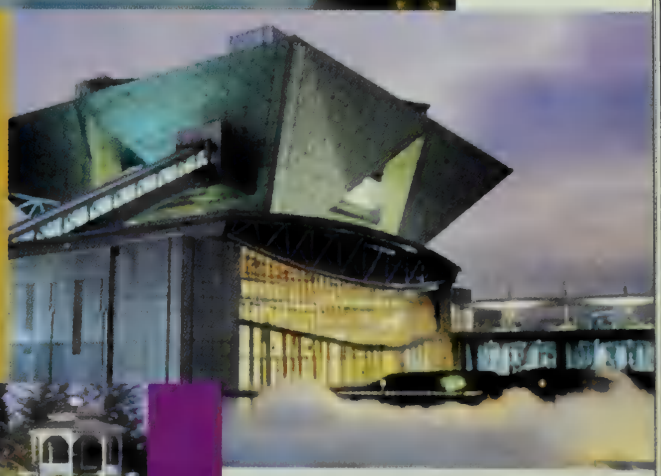




For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

Give your designs added dimension and dramatic impact.





Theme parks
◆
Fountains & pools
◆
Botanical conservatories
◆
Theatrical fog effects
◆
Miniature golf courses
◆
Dark ride effects
◆
Swamp fog simulation
◆
Ice rinks & arenas
◆
Family fun centers
◆
And more

Fog that mimics smoke, haze and steam.

Mee Fog looks like smoke but uses no chemicals or dry ice. It mimics steam but doesn't wet like mist. It can create the look of a tropical rain forest in a theme park, simulate realistic volcano steam effects and transform a hot, arid climate into a cool oasis.

Projects from the modest to the grandiose.

From intimate themed restaurants such as the Rain Forest Cafes to large-scale projects like Las Vegas's stunning Bellagio Hotel fountains – which use over 5,000 Mee Fog nozzles – environmentally friendly and energy efficient Mee Fog is the medium of choice of designers coast to coast.

Proven experience.

Mee Industries brings a great deal of experience to the special effects market. Our high pressure fog technology is mature and has been field proven in numerous applications since 1969.

Contact the Mee Fog People today for more information.

www.meefog.com



Are you talking to Mee?

626-359-4550
800-732-5364

MEE INDUSTRIES INC.

CIRCLE 104 ON INQUIRY CARD

"More and more, our projects require an

all-electronic information flow.

That's why more and more projects begin at

sweets.com."


DIRECTORY


CATALOG FILES


CD


SWEETS.COM


PRODUCT NEWS

Search. Compare. View. Select. Import. This is way too easy.

Sweet's CAD Library

The latest improvement to sweets.com, the new Sweet's integrated CAD Library, saves time in research, comparison, selection, specification and creation of construction documents. Sweet's exclusive navigation guides you through your search and bridges the gap between product groupings and the details available for a particular product model. Better than a standard "keyword" search, Sweet's search and selection criteria result in a more refined set of CAD Library drawings. Spend less time wading through pages of irrelevant search results, and more time getting your work done.

Detailed. Standardized. Flexible.

Formatted and layered by Sweet's to be easily searchable, viewable and directly usable, each CAD Library detail incorporates Sweet's Smart Layer Mapping capability. Smart layers allow easy, automated conversion from the pre-defined Sweet's layer names to your own in-house layering standard for the entire group of CAD Library details used in your project. We didn't call it "Smart" for nothing.

Making the Marketplace Work for You, **Now!**

Any format. Any time. Sweet's is bringing manufacturers and users together in a dynamic flowing marketplace. Go to sweets.com today and discover the latest ways that Sweet's can help you do your job easier, faster and more profitably than ever before.


Sweet's Group
McGraw-Hill Construction Information Group

A Division of The McGraw-Hill Companies



Sweet's
Construction's Product Marketplace℠

The Most Manufacturers.
The Most Buyers.
The Most Opportunity.

CIRCLE 105 ON INQUIRY CARD

sweets.com is part of the construction.com network

5AR10

Dates & Events

Calendar

Frank O. Gehry: The Architects Studio
Seattle
Until November 12
From Bilbao to Seattle, the models, drawings, and projects of Gehry are featured in this exhibit. In the Henry Art Gallery's East Gallery. 206/543–2280; www.henryart.org.

The Monumental Designs of Cesar Pelli
New Haven
Until November 3
The Yale School of Architecture will showcase this exhibition on the second-floor gallery of the Art and Architecture building, designed by former dean Paul Rudolph. The gallery also shows work in progress by the current dean Robert A.M. Stern. Yale University, 203/432–2292; www.yale.edu.



CIRCLE 106 ON INQUIRY CARD

The Un-Private House
Los Angeles
October 4–January 7, 2001
Organized by Terence Riley of MoMA, this exhibit examines 26 contemporary homes by a roster of international architects whose design reflects the transformation of the private house in response to changing cultural conditions and recent architectural innovations. At the UCLA Hammer Museum, 310/443–7047; www.hammer.ucla.edu.

Santiago Calatrava: Artist, Architect and Engineer
Florence, Italy
October 5–January 7, 2001
The first comprehensive exhibition of the work of this noted architect will be mounted in the Renaissance setting in the Palazzo Strozzi. The show will include over 100 sculptures, models, drawings, and photographs. In Florence, 00.39. 05.52.39.85.63.

The Long View: MOMA and Municipal Art Society Present Visionary Architecture
New York City
October 5–December 9
This series of exhibitions, curated by Philip Johnson and organized by Terence Riley and Peter Reed of MOMA, features five young architectural firms: SHoP, Reiser+ Umemoto, Michael Maltzan, UN Studio/Van Berkely & Bos, and Foreign Office Architects. At MOMA, 212/708–9400, www.moma.org.

Masterpieces from the Vitra Design Museum: Furnishing the Modern Era
New York City
October 10–February 4, 2001
Sponsored by the Smithsonian, Cooper-Hewitt,

Open Ends: Five Thematic Exhibitions and Four Large-Scale Installations
New York City
Until January 2, 2001
This exhibit is the third and final cycle of MoMA2000, which celebrates the richness of their holdings. Among the exhibits are 65 images, in a variety of media, of visionary projects by architects such as Rem Koolhaas, Zaha Hadid, and others. At MOMA, 212/708–9400; www.moma.org.

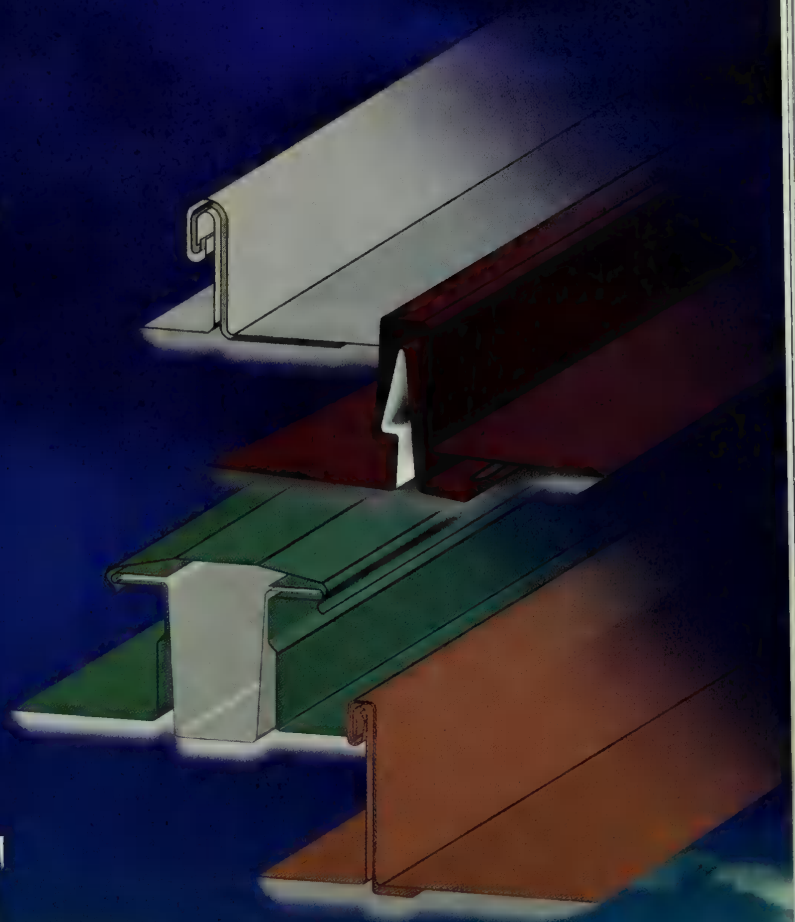
COPPER SALES, INC.

UNA-CLAD

A Warranty you can trust

Weathertight WARRANTY

- Complete coverage (5-20 yr Plans)
- Third party inspections
- Certificate of Quality Compliance
- Transferable



Certified INSTALLERS

- Professional
- Reliable
- Experienced
- Committed

PRODUCT Performance

- 4 Weathertight Profiles
- 4 Substrates
 - Galvanized
 - Copper
 - Galvalume
 - Aluminum
- 28 Standard Colors
- Unlimited Custom Colors

Call UNA•CLAD today and speak with our experienced, knowledgeable staff.

800.426.7737

www.UNACLAD.com

...todays marketplace ... you've got to have it all.
...oduct that performs to exacting standards.
...stallers trained and certified to do the job right.

A real-life Warranty that speaks your language and provides you with the protection you require.
UNA•CLAD ... One Source Covers It All

CIRCLE 107 ON INQUIRY CARD

National Design Museum, this exhibition of important 20th-century furniture from the Vitra will focus on chairs and seating, selected for their role in the evolution of industrial furniture design from its beginning in the 1850s to today. Cooper Hewitt, 212/849–8400; www.si.edu/ndm.

Utopia and Reality—Modernity in Sweden 1900–1960
Stockholm
October 7, 2000–January 14, 2001
Exhibition of over 450 works by architects, designers, and artists focusing on how modernity was expressed differently in Sweden from the rest of the world. Modern Museum, +46 8 5195 5210.

Preserving the Recent Past II
Philadelphia
October 11–13
Sponsored by the National Park Service, the General Services Administration, the Society of Architectural Historians, DOCOMOMO, and other preservation-minded groups, this weekend of events includes 70 speakers, an exposition, tours, and a curtain-wall symposium. Loews Hotel (historic PSFS Building). 202/343–6001.

Form! Function! Future! Conference
Portland, Ore.
October 14–17
This conference offers professional development for private, corporate, and public architects to offer their services in a new marketplace environment. Features include: successful business practices, good design concepts, computing for design, meeting client's needs, and new sources of revenue. Portland Hilton Hotel. 202/626–7410.

62nd Annual F.W. Dodge Outlook 2001 Executive Conference
Washington, D.C.
October 17–18
Meet with your peers from across the nation to discuss the rapidly changing construction marketplace, and where technology will take the industry next. Renaissance Mayflower Hotel. To register go to https://outlook2001.800cmi.com or 800/847-4374.

Nature Constructed/Nature Revealed: Eco-Revelatory Design.
Washington, D.C.
Through October 22
This exhibition presents 15 landscape-architecture projects through video, sculpture, models, photographs, drawings, and plans. National Building Museum. 202/272–2448.

FEDCON 2001
Washington, D.C.
October 23
Federal officials involved in construction will present building budgets, plans, and updates on new regulations and impacts. Free of charge and cosponsored by CMD Group and the National Institute of Building Sciences. 800/283–4699.

North American Construction Forecast
Washington, D.C.
October 24
This daylong conference sponsored by CMD Group brings together economists and analysts from the United States, Canada, and Mexico to explore conditions that will determine building activity. National Press Club, Washington, D.C., 770/417–4261.

Aluminum by Design: Jewelry to Jets
Pittsburgh
October 28, 2000–February 11, 2001
The first major museum exhibition to explore

Get "Up to Code" Fast
with the QuickStart Solution

Only from ICBO

Building departments across the United States are buying and adopting the new 2000 *International Building Code*.

That's why ICBO created the Quick*Start* Solution to help you get up to speed on the new code requirements. It includes the *International Building Code* and ICBO's exclusive *IBC-ASTM Referenced Standards* containing all ASTM standards referenced in the IBC. That's more than 200 standards in over 1,300 pages!

When you purchase this comprehensive set from ICBO, we give you a complimentary copy of *Code Highlights—A QuickStart Guide to the IBC* to streamline your understanding of the IBC. This all means faster, easier, more confident application of the code provisions. Bottom line, these products will save you money and time.



Quick*Start* Solution
(2000 IBC, 2000 IBC-ASTM Referenced Standards, Code Highlights—A Quick*Start* Guide to the IBC)

Soft Cover	**Item No. 099S2K**	**$212.00**
Loose Leaf	**Item No. 099L2K**	**$237.50**

(ICBO Member Discounts Available) Items also sold separately.

Order Today!
(800) 284-4406
www.icbo.org

More Exclusive Offers from ICBO

✓ 2000 IBC Exclusive Hard Cover Edition—**Quantities are limited.**
✓ Handbook to the IBC Fire- and Life-safety Provisions
✓ Handbook to the IBC Structural Provisions—Available November 2000

Call us or visit our website for details and pricing.

More people buy code products from ICBO than from anywhere else in the world!

CIRCLE 108 ON INQUIRY CARD

You're one click away from constructing the future.



e-Builder™

2424 North Federal Highway • Suite 315 • Boca Raton, Florida 33431 • www.e-Builder.net

1-800-580-9322

CIRCLE 109 ON INQUIRY CARD

© 2000 e-Builder, Inc. All rights reserved.

From No Clear Directions to Order And Simplicity.



At Last, One Drawing Standard.



Don't you feel better?

The Uniform Drawing System™

Now part of the new U.S. National CAD Standard.

The Construction Specifications Institute

800.689.2900

www.csinet.org

CIRCLE 110 ON INQUIRY CARD

Dates & Events

how aluminum has inspired creativity and sparked innovation in design, including works by such visionaries as René Lalique, Jean Prouvé, Ludwig Mies van der Rohe, Russell Wright, Charles and Ray Eames, and Gio Ponti. Carnegie Museum of Art 412/688–8690.

Design Week and NeoCon
New York City
October 30–November 4; NeoCon Nov. 1–2
New York Design Week is a six-day design festival throughout Manhattan highlighting the city's permanent showrooms and creating a spectacle of trade shows and events. It incorporates manufacturers showroom tours; the NeoCon show with over 250 exhibits, educational seminars, cutting-edge design solutions, technology, trends, and more; an open house at the New York Design Center; a street party; tours of the A&D and D&D buildings and more. 800/528–8700; www.merchandisemart.com

Urban Land Institutes' Fall Meeting: Changing Places: Real Estate in the New Economy
Chicago
October 31–November 4
This year's meeting reflects the challenges faced by design professionals as they create places for people living and working in a digital economy. New opportunities, new rules, new players, and new patterns of development are addressed. 800/321–5011; www.uli.org

Art is Work: Milton Glaser Retrospective
New York City
November 2–December 8
The largest retrospective ever held in New York on the work of this well-known American graphic designer. AIGA's Fifth Avenue gallery. 212/807–1990/www.aiga.org.

Computers for Construction 2000 and AEC Systems
Anaheim, Calif.
November 6–9
The only trade show and conference dedicated exclusively to computer use by contractors. At this regional computer and high-tech event, the design and construction industries join forces. Anaheim Convention Center. 610/458–5472.

Good Design is Good Business: Design Strategies for the New Economy
Washington, D.C.
November 17
A Business Week/Architectural Record conference in association with the National Building Museum and the AIA. This half-day conference brings together key business leaders and architects to discuss collaboration between architects and clients resulting in the achievement of business goals. Participants can attend an exclusive preview reception for *On the Job: Design and the American Office*. National Building Museum, To register go to www.architectural-record.com.

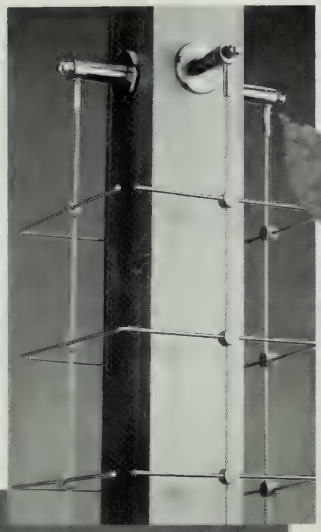
8th Annual CANstruction: Designers Build Big to End Hunger
New York City
November 9–20
The winning teams' work will be on display at the New York Design Center. The public is asked to donate a can of food as the price of admission. 212/792–4666.

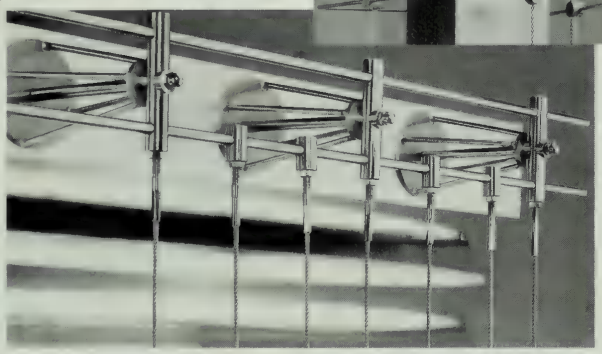
On the Job: Design and the American Office
Washington, D.C.
November 18–June 2001
This major exhibition documents the American office as an architectural and social space, a dynamic environment whose significance extends beyond physical boundaries. National Building Museum. Registration required 202/272–2448 www.nbm.org.

Green Solutions

DecorCable Innovations is proud to introduce the new Jakob INOX LINE GreenSystem that is specifically designed for vertical plantscapes and outdoor greening projects.

Whether classic or avant-garde, our wire rope and connector products represent the state-of-the-art in all architectural styles. Ask for a copy of the Jakob INOX LINE G1 catalog.







DÉCOR CABLE INNOVATIONS

DécorCable Innovations, LLC
660 West Randolph St.
Chicago, IL 60661
Tel 312.474.1100
1-800.444.6271
Fax 312.474.1789
E-mail sales@decorcable.com
Website: www.decorcable.com

CIRCLE 48 ON INQUIRY CARD

ARCHITECTURAL RECORD CALL FOR ENTRIES

Record Houses 2001

The editors of ARCHITECTURAL RECORD announce the 46th annual RECORD HOUSES awards program. This program is open to any registered architect. Work previously published in other national design magazines is disqualified. Of particular interest are projects that incorporate innovations in program, building technology, and use of materials. The entry fee is $50 per submission; please make checks payable to ARCHITECTURAL RECORD. Entries must also include plan(s), photographs (transparencies, slides, or prints), this entry form, and a brief project description, all firmly bound in an 8 ½-by-11-inch folder—postmarked no later than October 31, 2000. Anonymity is not necessary. Winning entries will be featured in the 2001 RECORD HOUSES. Other submissions will be returned or scheduled for a future issue. Please include a self-addressed envelope with the appropriate postage, and allow 10 weeks for return.

Name of firm: _____

Address: _____

Phone: _____

Fax: _____

E-mail: _____

Contact person: _____

Name of project: _____

Location of project: _____

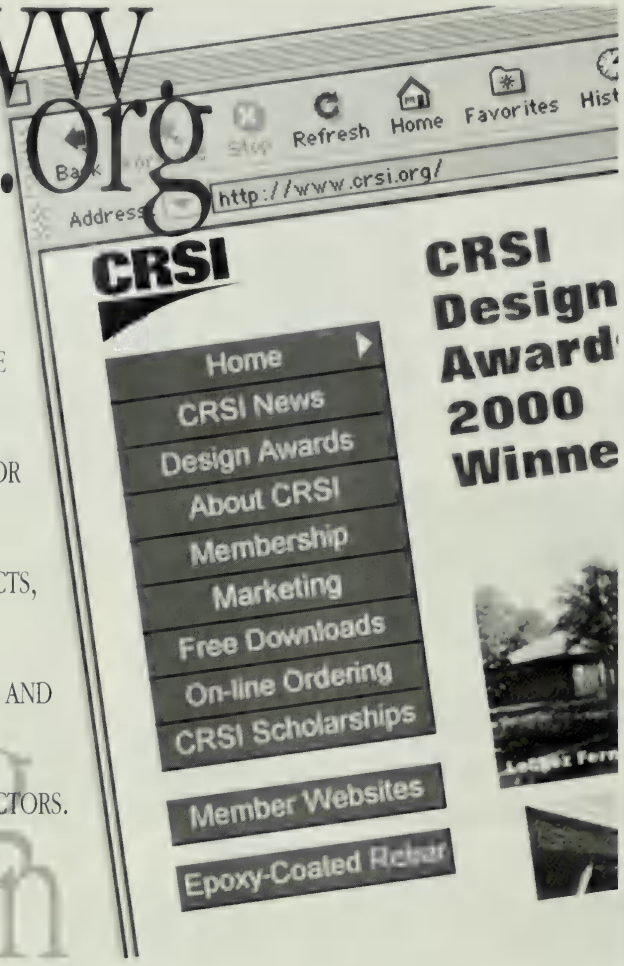
Signature: _____ **Date:** _____

Print name: _____

Submissions should be mailed to:
Sarah Amelar • RECORD HOUSES • ARCHITECTURAL RECORD • Two Penn Plaza, Ninth Floor • New York, NY 10121

This form must be included with your submission. If you have any questions, please E-mail Sarah Amelar at sarah_amelar@mcgraw-hill.com

www.crsi.org



EASILY ACCESSIBLE RESOURCES FOR ARCHITECTS, ENGINEERS AND CONTRACTORS.

log on

. . . FREE LITERATURE DOWNLOADS . . . ORDER PUBLICATIONS, SOFTWARE AND VIDEOS ON-LINE . . . VIEW AND/OR DOWNLOAD THE CRSI CATALOG . . . GET CRSI MEMBERSHIP INFORMATION . . . LINK TO CRSI MEMBER WEB SITES . . . ASK FOR FREE EPOXY-COATED REBAR LITERATURE . . . INDUSTRY INFORMATION AND NEWS.

These resources and more are available on the up-to-date CRSI web site. For quickly accessible information on services and products, visit this site for news, industry information, CRSI corporate history, locations and contact information.

The web site features free downloads of valuable literature, including Research Series, Engineering Data Reports, Case Histories and articles on Pavements - Continuously Reinforced Concrete. The CRSI Catalog is available for on-line viewing, ordering, or downloading. Items from the catalog can be purchased through the web site whenever you visit.

To find out more about CRSI Resources, log on to www.crsi.org, call or fax today.

CRSI

Concrete Reinforcing Steel Institute
933 N. Plum Grove Road
Schaumburg, Illinois 60173-4758
847/517-1200 Fax: 847/517-1206
Website: www.crsi.org

© 2000 CRSI

CIRCLE 111 ON INQUIRY CARD

Dates & Events

Competitions

Competition Notice for the Museum of the 20th Century in the Arengario
Deadline for first-stage plans: October 16
This juried competition involves the restoration and preservation of the Arengario, in Piazza del Duomo, and, on the interior, the creation of a new Museum of the 20th Century. The first stage of the competition consists of anonymous submissions. Five proposals will be chosen for the second stage. www.milanoprogetti.org or Raffaella Poletti at +02/89013883.

Before + After: The Intentions and Processes of Transformation
Deadline for entries: October 16
A juried exhibition will present a critical inquiry into architectural interventions and the trends affecting change in the built environment. Two images and supporting documentation will compare the state of an original condition and the effect of a practical and transformative intervention. $15 entry fee. 303/443–1945.

2001 Chicago Neighborhood Development Awards
Deadline for entries: October 25
Created in 1995 by Local Initiatives Support Corporation/Chicago and #8211, this program offers several awards for community-oriented architectural and development projects. Contact Garry Huebner or Jeanette Figueroa for an application. 312/360–0400.

Architecture, Image, and Emotion
Deadline for entries: October 30
The competition is designed to elicit ideas for a retail facility to be built on different scales. Open to all architects and engineers registered with their respective professional associations or possessing the appropriate qualifications in their home country, entries may be submitted as a team. www.arcadata.it.

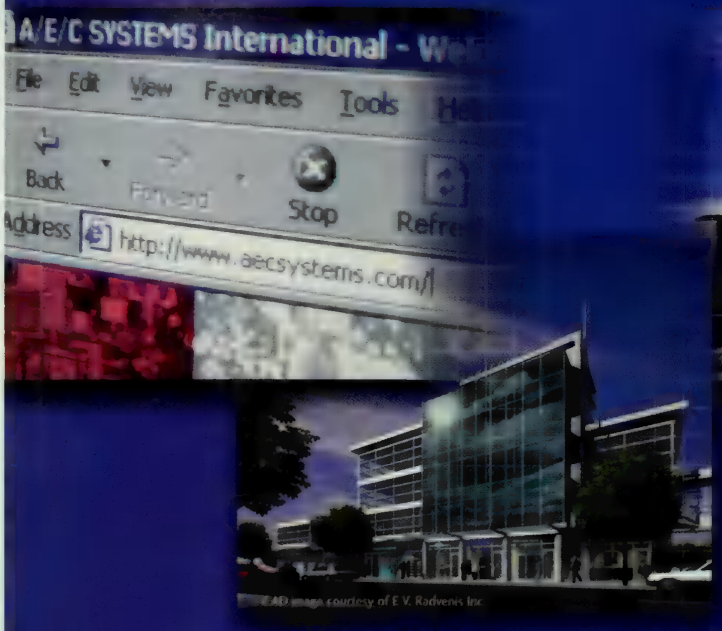
Rudy Bruner Award for Urban Excellence
Deadline for entries: December 4
This award honors urban projects that demonstrative collaborative processes and meaningful values into good design. Cash prizes are awarded. 617/492–8401, ext. 184.
www.brunerfoundation.org.

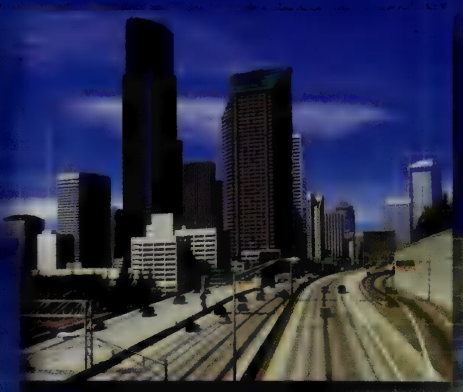
Please submit for the Dates and Events section to ingrid_whitehead@mcgraw-hill.com.


Mocha
It's just one
of the delicious new
AccuColor® choices.
AccuColor
TEC offers you 18 new, up-to-the-minute shades of AccuColor® sanded and unsanded grouts and caulks. Tastefully blended to coordinate with today's tiles.
Call 1-800-323-7407 today for a free color selection guide.
TEC®
an H.B. Fuller company
CIRCLE 112 ON INQUIRY CARD

INTEGRATING THE AEC INDUSTRY

On-line and On-site







EXHIBITS & CONFERENCE: NOVEMBER 7-9, 2000

Anaheim Convention Center, Anaheim, CA

The explosion of new technology, particularly the Internet, is transforming the way design and construction professionals transact and interact.

Find out why it's now critical to implement this emerging technology, and how to utilize it to complete higher quality projects under budget and within deadline. Test-drive and compare new products and services in Internet applications including project collaboration, e-business, wireless communication, financial management, 3D design and more!

...solutions designed to connect architects, designers, engineers, contractors, GIS professionals, facility managers, and owners.

Computers for Construction 2000

& A/E/C SYSTEMS Fall

Sponsored by ENR Engineering News-Record

Produced by A/E/C SYSTEMS International, A Division of Penton Media, Inc. Penton

Register now on the web at **www.aecsystemsfall.com** *or call* **(800) 451-1196.**



eProject Lead Manager. The most constructive way to manage the entire sales process.

Building on the power of the F.W. Dodge project news service, eProject Lead Manager combines extensive project news content with the interactivity to mobilize your team to action at any point in the bidding process.

With eProject Lead Manager, sales leads, customer relationships and market information can be tracked and managed with the speed, flexibility and security you need to keep the leads coming, the internal dialogue flowing and the sales process moving. Sort, track and compare leads. Develop sales strategies. Add notes and tasks, update project status and much more. Day and night, from anywhere. At the speed of the Internet. With no new technology required.

Visit www.construction.com

To see for yourself how eProject Lead Manager can help you manage your products and services more productively, visit construction.com for a brief overview, or call 1-800-FW DODGE.

F.W.DODGE
McGraw-Hill Construction Information Group

The Most Comprehensive, Most Accurate, Most Used Source of Construction Information.

CIRCLE 113 ON INQUIRY CARD

A Division of The McGraw-Hill Companies

For everyone interested in design, construction and the built environment.

THE CONFERENCE
Over 200 expert-led workshops, special events, tours and receptions

THE TRADESHOW
Over 350 exhibits featuring leading U.S. and Canadian suppliers of building products and services

16th Annual

Build Boston

NEW! DAILY KEYNOTE LUNCHEONS
Addressing critical concerns to the U.S. building industry
Sponsored by McGraw-Hill CIG

Tuesday, November 14
The Construction Outlook for the U.S. and New England — with Robert A. Murray, VP/Economic Affairs, McGraw-Hill CIG, Lexington MA

Wednesday, November 15
The Editors Roundtable — with Robert A. Ivy FAIA, Editor-in-Chief, *Architectural Record*, New York City; Robert A. McNamara, Editor-in-Chief, *Desktopbid*, Chicago; Howard B. Sussman, Editor-in-Chief, *Engineering News Record (ENR)*, New York City

Thursday, November 16
The Future of e-business and the Construction Industry — with Norbert W. Young, Jr. FAIA, President, McGraw-Hill CIG and [illegible]

McGraw-Hill Construction Information Group

November 14-16, 2000
World Trade Center Boston

Free admission to the exhibit hall and workshop discounts if you register by October 20, 2000.

www.buildboston.com
800-544-[illegible]

Sponsored by
Boston Society of Architects/AIA
BSA

PSFS Project Diary *continued from page 147*

over to engineer's offices and the vault dismantled. Only some of the safe-deposit boxes were reinstalled on the second-floor telephone area. The black-and-white marble stair, plus a drinking fountain leading from the second-floor hall to the third-floor mezzanine, still remains. Although the lavishly wood-paneled boardroom, dining room, and ancillary spaces have been restored on the 33rd floor, none of the existing boardroom table and chairs or the furniture in the dining room is back in place yet. Since the opening, the floor has been used for various functions, but ordinary temporary furniture has been brought in for the occasion. Nevertheless, the original furniture is being stored in the warehouse. Jonathan Tisch reports that he intends to have it go back to the 33rd floor. (Daroff and Jones hadn't heard of this plan yet, but the Philadelphia Museum is delighted.)

The question remains: does the hotel identity of today now overwhelm the International Style identity of the Howe & Lescaze banking spaces? Actually not, but not for the stated intentions. Daroff says, "We wanted to show respect for the original and soften it while creating a smooth transition from the original design to the present day." In reality, anyone familiar with the 1920s International Style will still be able to tell where the old ends and the new begins. Strangely, that is the strength of Daroff's design. Her more flamboyant approach allows Howe & Lescaze's contribution to have its own identity, and Daroff to have hers.

All the players—Tisch and Loews, Daroff and Bower Lewis Thrower—may not have given us the hotel that Howe and Lescaze would have created if they had had the opportunity to come back to earth and do this conversion themselves. As noted, however, hotels are not office buildings. Convention guests could well prefer Daroff's interiors to anything the original architects would have tried. It is hard to know, since urban hotels of that period tended not to be International Style either. (Think of the classically moderne Waldorf Astoria) or the Art Deco ones in Miami Beach.)

In terms of the reaction, Robert Powers has voiced the general feeling: "I've been impressed by Loews' involvement. Jonathan Tisch does appreciate the building for what it is." At the same time, Powers warns, "If the hotel were sold after five years—or Loews decided to change the historic interiors after that time, there is nothing stopping them. It's only as safe beyond that as long as Tisch and Loews remain committed." ■

William Lescaze–designed chairs and tellers' counters from the PSFS bank have been incorporated in the new registration lobby.



Italian Design
German Engineering
Swiss Precision
American Craftsmanship

Classic European and Contemporary Windows and Doors



CASE
WINDOW AND DOOR

301 Green Street
Schenectady, NY 12305
800-227-3957

CIRCLE 114 ON INQUIRY CARD

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

ANSWERS

Questions appear on page 178. To receive CES credits, fill in the education reporting form below or on our Web site (www.architecturalrecord.com).

1. The design process uses both two-dimensional sketches and three-dimensional models. These three-dimensional models get progressively larger as they approach the final shape. Once a scale model that closely resembles the desired shape has been created, it is digitized, creating a mathematical model of the building that can be used by the fabricator's machines to manufacture the metal skin.

2. The Gaussian analysis is a computer study that models the extent of the curvature of the exterior surfaces of the building. It was used to predict which portions of the metal skin would curve surfaces so much that they could not be shaped and installed by hand. The architects and fabricator reworked these portions of the outer surface of the building.

3. Each metal panel, consisting of aluminum head and sill extrusions, metal fins, and a metal skin, hangs from a five-inch-diameter metal pipe girt. A tongue that runs along the length of each sill fits into a slot in the top of each head extrusion. This keeps the panels from moving in the wind but still allows thermal expansion and contraction to occur.

4. An interference coating alters the natural reflection of the spectrum of light, absorbing selected wavelengths and reflecting the desired color.

5. With flat surfaces, it is assumed that the wind loads will be distributed equally to the four corners. When the wind strikes an oddly shaped panel, such as one with a double-reverse curve, there is no way to intuitively determine what the resulting load conditions may be. For example, it is possible that a single panel might be subject to both positive and negative wind pressure at the same time and have unequal loads at the corners. The engineers used computer analysis to study the loading conditions.

AIA/CES EDUCATION REPORTING FORM

(Use to report learning unit hours earned for ARCHITECTURAL RECORD only.)

Member information:

Last Name **First Name** **Middle Initial or Name**

AIA ID Number

Program/project title: Architectural Record (10.00)

☐ "Creating Sleek Metal Skins for Buildings" [page 173]
☐ "Infloor Wire & Cable Management" [page 188]
Section sponsored by Wiremold
☐ "Site/Roadway Optical Systems Design and Application Guide" [page 192A]
Section sponsored by Kim Lighting (worth 2 LUs)

Completion date (M/D/Y): _____ / _____ / _____
AIA/CES Credit: Each article or sponsored section will earn you one AIA/CES LU hour of health, safety, and welfare credit, except the Kim Lighting sponsored section, which is worth 2 LUs.
Fill in: ____ total LU hours.

Material resources used:
Journal article or sponsored section: This article or sponsored section addresses issues concerning the health, safety, or welfare of the public.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

Send completed form to University of Oklahoma, Continuing Education, AIA/CES, Room B-4, 1700 Asp Avenue, Norman, OK 73072-6400; fax 405/325-6965. To respond by E-mail, visit www.architecturalrecord.com and click on Continuing Education. For more information, call 800/605-8229.

The more your business cares about how we do in school the more we will.



You can help students everywhere and help your business at the same time. How? By asking potential employees for their high school records.

84% of high school students say they'd work harder if they knew that employers would look at their transcripts.* Thousands of businesses are already requesting records.

When you ask, you'll be sending a powerful message to students: "How you do in school can help determine what kind of job you'll get, how much you'll earn, even how far you'll go."

What does your business gain? Better students make better entry level workers; they have lower failure rates and require less skills training. You can learn a lot about a student from a school record: grades, courses taken, attendance, and extracurricular activities.

So start now by logging on to **www.makeacademicscount.org** for information on making academics count.

Make asking for student records business as usual.

National Alliance of Business
American Federation of Teachers
National Association of Secondary School Principals
Achieve, Inc.
The Business Roundtable
National School Boards Association
American Association of School Administrators
U.S. Department of Education
Business Coalition for Education Reform
National Education Association
U.S. Chamber of Commerce
National Governors' Association

Ad Council

Education Excellence Partnership

MAKING ACADEMICS COUNT

*Source: Public Agenda (1999)

ADVERTISERS INDEX

Bold: *indicates page number.*
Italic: indicates Reader Service Number.

PAGE NUMBER	READER SERVICE NUMBER	
249	*101*	3D Win
68	*42*	A/D Fire Protection Systems Inc
262		A/E/C Systems
49	*30*	Adams Rite Manufacturing Co
269	*116*	AECdirect
275		AIA Online
32	*17*	Alusuisse Composites Inc
196	*73*	Andersen Commercial Group
35	*18*	Ann Sacks Tile & Stone
246	*96*	Arakawa Hanging Systems
274		Architectural Record Interviews
7		Architecturalrecord.com
47	*28*	Aristech Acrylics
59	*36*	Armstrong
4		Autodesk (LT Division)
60		Autodesk (piracy)
56	*35*	Autodessys
6	*3*	Avonite
236	*85*	Belden Brick Company, The
97	*54*	Bentley
42	*23*	Bergerson
187	*68*	Bricsnet US
264		Build Boston
107		Business Week/Architectural Record
66	*41*	Buzzsaw.com
61	*37*	C/S Group
52	*32*	Canterbury International
265	*114*	Case Window & Door
62	*38*	Ceco Door Products
74	*47*	CENTRIA Architectural Systems
239	*87*	CENTRIA International
246	*97*	Charles Loomis
65	*40*	CNA/Victor O Schinnerer & Co Inc
235	*84*	Copper Development Association
255	*107*	Copper Sales Inc
72	*45*	Cornell Iron Works
260	*111*	CRSI/Concrete Reinforcing Steel Inst
258	*110*	CSI/Construction Specifications Inst
259	*48*	DécorCable Innovations LLC
148-149		Dell
73	*46*	Design Within Reach
14-15	*7*	DORMA Group North America
244	*94*	Doug Mockett & Company Inc
37	*19*	Dow Chemical Company
22-23	*11*	DuPont Antron®
25	*12*	DuPont Antron®
54-55	*34*	DuPont Corian®
150	*61*	DuPont Fire Extinguishants
257	*109*	e-Builder
177	*63*	Eagle Windows & Doors
70	*44*	EFCO Corporation
254	*106*	Electronics Diversified Inc
81	*51*	elliptipar
241	*89*	Follansbee Steel
170-172		Forms + Surfaces
263	*113*	FW Dodge, Div of McGraw-Hill Cos
20-21	*10*	Georgia-Pacific Dens-Glass® Gold
221	*77*	Georgia-Pacific Wood I Beam™
244	*93*	Glass Studios Ltd
248	*99*	GR Plume Company
184	*67*	Graphisoft
243	*92*	Gypsum Association
103	*55*	Hanover Architectural Products
230	*81*	Hansgrohe Inc
231	*82*	Homasote
64	*39*	Hoover Treated Wood Products Inc
256	*108*	ICBO/Internatl Conf of Bldg Officials
44	*25*	Italian Trade Commission
215	*76*	IWP
78	*50*	J & J Commercial
3cov	*119*	Kawneer Company Inc
274	*117*	Keystone Retaining Wall Systems
27	*14*	Kim Lighting
192A-192T	*70*	Kim Lighting (CEU)
10-11	*5*	Kinko's
50-51	*31*	KitchenAid
4cov	*100*	Kroin Incorporated
46		LeFevre Studio
267	*37*	Making Academics Count
242	*91*	Marble Institute of America Inc, The
8-9	*4*	Marlite
28-29	*15*	Marvin Windows & Doors
279	*118*	McGraw-Hill Professional Group
242	*90*	McNichols Co
251B	*104*	Mee Industries Inc
232	*83*	Metal Construction Association
240	*88*	Mortar Net
247	*98*	Nathan Allan Glass Studios Inc
113	*57*	National Gypsum Company
115	*58*	Nemetschek North America
251A	*103*	Northwest Energy Efficiency Alliance
211	*74*	Owens Corning
225	*78*	Pacific Lumber Company, The
116	*59*	Pemko
53	*33*	Petersen Aluminum
41	*22*	Pittsburgh Corning
250	*102*	Poorman-Douglas
207	*121*	Pozzi Wood Windows
45	*26*	PPG (Pittsburgh Paints)
16-17	*8*	PPG Starphire® Glass
43	*24*	RedVector.com
2cov-1	*1*	Revit Technology Corporation
227	*79*	ROHL
117	*60*	Roppe
40	*21*	Royal Institute of British Architects
193	*71*	SBCCI/Southern Bldg Code Cong Intl
228	*80*	Sherwin-Williams
69	*43*	Sloan Valve Company
38-39	*20*	Solutia
48	*29*	Speakman
169	*62*	SPI Lighting Inc
108-109	*56*	StarNet
2-3	*2*	Steelcase
252-253	*105*	Sweet's, Div of The McGraw-Hill Cos
261	*112*	TEC
82-83	*52*	Technical Glass Products
238	*86*	Tectum Inc
194-195	*72*	Trex
179	*64*	USG Corporation
26	*13*	Viracon
183	*66*	Visa Lighting Corp
180	*65*	Vistawall Architectural Products
18	*9*	VT Industries
30-31	*16*	Vulcraft, A Division of Nucor Corp
245	*95*	Wausau Tile
213	*75*	Wausau Window and Wall Systems
198	*120*	Wayne-Dalton Corporation
12-13	*6*	Weather Shield Windows & Doors
77	*49*	Wilsonart International
91	*53*	Wiremold
188-192	*69*	Wiremold (CEU)

For additional information on these advertisers, circle corresponding number on Reader Service Card, or visit our web site at ***www.architecturalrecord.com*** *and click on Advertiser Information.*

Executive Offices

The McGraw-Hill Companies
Two Penn Plaza
New York, NY 10121-2298

VICE PRESIDENT / PUBLISHER
Elaine Shusterman
(212) 904-3475 Fax: (212) 904-4652
shusterman@mcgraw-hill.com
Assistant: Monika Macezinskas

ADVERTISING DIRECTOR
David Johnson
(212) 904-6217 Fax: (212) 904-4652
dave_johnson@mcgraw-hill.com
Assistant: Joan Notaris

PRODUCTION MANAGER
Stephen R. Weiss
(212) 904-2793 Fax: (212) 904-6800
stephen_weiss@mcgraw-hill.com

PROMOTION DIRECTOR
Deborah Smikle-Davis
(212) 904-4558 Fax: (212) 904-6774
deborah_smikle-davis@mcgraw-hill.com

Advertising Sales

NORTHEAST / MID-ATLANTIC
Two Penn Plaza
New York, NY 10121-2298
Ted Rzempoluch
(212) 904-3603 Fax: (212) 904-4256
rzempoluch@mcgraw-hill.com

MIDWEST
One Prudential Plaza
130 East Randolph Street, Suite 400
Chicago, IL 60601-6213
Mike Gilbert (IL, IA, MN, MO, OH, W.PA, WV)
(312) 616-3338 Fax: (312) 616-3276
mike_gilbert@mcgraw-hill.com
David Johnson (IL, IN, KS, MI, ND, NE, OK, SD, TX, WI)
(312) 616-3339 Fax: (312) 616-3276
dave_johnson@mcgraw-hill.com
Assistant: Mamie Allegro

SOUTHEAST / MID-ATLANTIC
4170 Ashford-Dunwoody Rd.
Atlanta, GA 30319
Susan Shepherd
(404) 843-4770 Fax: (404) 252-4056
sshepherd@mcgraw-hill.com
Sales Assistant: Kathy von Broembsen

WEST (AZ, CA, CO, NM, NV)
Media Sales Associates
1750 Nantucket Circle, #134
Santa Clara, CA 95054
Bill Hague
(408) 492-9292 Fax: (408) 492-9797
(800) 830-4351 Fax: (253) 858-7576
billh@abptuf.org

WEST (BRIT. COLUMBIA, ID, OR, S. CA, UT, WA)
5901 S.W. Macadam Avenue, Suite 230
Portland, OR 97201
Bill Madden
(503) 224-3799 Fax: (503) 224-3899
billmad@msn.com

CANADA (EXCEPT BRITISH COLUMBIA)
48 Little Rebel Road, RR 3
Schomberg, Ontario L0G 1T0
Frank A. Spangenberg
(905) 939-0653 Fax: (905) 939-0654
spang@sympatico.ca

CLASSIFIED ADVERTISING / MANUFACTURERS' SPOTLIGHT / POSTCARD SERVICE
Ally Wingate
(800) 484-4042 ext 3042 Fax: (770) 889-9152
ally_wingate@mcgraw-hill.com

Editorial

(212) 904-2594 Fax: (212) 904-4256
www.architecturalrecord.com

Subscriber Service

(888) 867-6395 (USA only)
(609) 426-7046 Fax: (609) 426-7087
p64es@mcgraw-hill.com

Back Issues

(212) 904-4635
phyllis_moody@mcgraw-hill.com

Reprints

(609) 426-5129 Fax: (609) 426-5472
doreen_bitowf@pubs.mcgraw-hill.com



AECdirect links your worksite with the Internet, empowering you to spend more time designing and building. Match specification information from MASTERSPEC® to corresponding product data on Architects' First Source and Sweet's, a service only available on AECdirect. Grow your business with valuable development tools from leading sources, access the only Web source for AIA contract documents, and continue your professional development with online AEC seminars.

AECdirect

Designed to Build Results.

Get the job done faster, make your clients happier, earn profits more quickly, and make your life easier at AECdirect. With a simple mouse click, you can leverage technology to your advantage.

IBM e an e-business solution

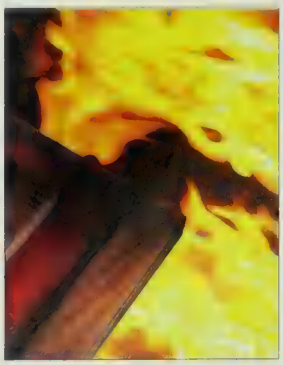
AECDirect is an IBM e-Business. The IBM logo, e-business logo and e-business Mark ▬ trademarks of IBM Corporation in the U.S. and other countries. For IBM Mark meaning and disclaimers, visit www.ibm.com/e-business/casestudies

CIRCLE 116 ON INQUIRY CARD

nding Partners: AIA BENTLEY CMDGROUP PIX The McGraw-Hill Companies Hanley-Wood, LLC

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Duraflake FR® Particleboard



Architects specify Willamette Duraflake FR® fire-rated particleboard for Class 1 fire protection for wall systems, store fixtures, furniture, & case goods. It has a UL flame-spread rating of 20 & a smoke-developed rating of 25. It resists warping & won't leach chemicals. Smoothness, machinability, & uniformity make it an ideal substrate. Third-parties offer a wide variety of laminated surfaces. Call today for information & FREE Duraflake Specifications Binder. 800-887-0748, Ext. 310

Willamette Industries, Inc.

CIRCLE 150 ON INQUIRY CARD

Insulated Translucence in Glass



Quality buildings can now have all the benefits of insulated translucent glazing PLUS the timeless beauty and durability that comes only from glass. Unlike plastic solutions, SOLERA® insulated translucent glazing units deliver over 70% light transmittance plus U values of .25 to .14. Curtain wall, sloped, skylights....glass to architectural spec. call (902) 794-2899 or visit www.advanced-glazings.com

Advanced Glazings, Ltd.

CIRCLE 151 ON INQUIRY CARD

Willamette Classic Glulam™



For architects, Willamette Classic Glulam™ beams possess superior strength values and offer design flexibility. Available nation-wide in a variety of appearances and wood species, Willamette Classic Glulams are commonly used as roof and floor beams, headers, columns, girders, and deck panels. Call today for information and we'll send you our FREE Specifications Binder. 800-887-0748, Ext. 410

Willamette Industries, Inc.

CIRCLE 152 ON INQUIRY CARD

Alpha Collection 2000 Aluminum-Stainless Steel



New and innovative design patterns and textures. Ideal for most vertical surfaces. Border to border standard sizes. Thickness from 0.025" to 0.064". Quantity discounts and free design consulting. Ask us about our custom capability. SD+T Marketing INC., Phone: 305-856-3825 TollFree: 877-626-2595 Fax: 305-856-1287 Email: sales@sdtmarketing.com Web: www.sdtmarketing.com

SD+T Marketing Inc.

CIRCLE 153 ON INQUIRY CARD

Ludowici Roof Tile

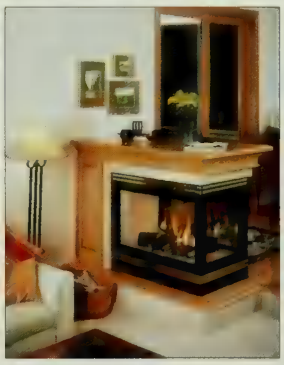


After more than 100 years, Ludowici clay roof tiles remain the preferred choice of architects and building professionals. No other clay tile manufacturer offers more colors, styles, fittings, textures, or finishes. And every tile is backed with a 75-year limited warranty (see actual warranty for details.) Call for full-color brochure or visit www.ludowici.com

CertainTeed Corporation

CIRCLE 154 ON INQUIRY CARD

Three-Sided Fireplace for Unlimited Installations



Heat-N-Glo introduces model PIER-TRC, a three-sided direct vent fireplace that can be terminated vertically or horizontally to accommodate nearly any application. The PIER-TRC is perfect as a room divider, bar, end of counter or a wide variety of creative installation possibilities. As with all Heat-N-Glo fireplaces, the PIER-TRC can be operated by remote control for the ultimate in convenience. Call 888-427-3973.

Heat-N-Glo

CIRCLE 155 ON INQUIRY CARD

Concrete Waterproofing by Crystallization



Applied as a slurry coating Xypex is a chemical treatment that waterproofs by penetrating the concrete with a crystalline formation that "plugs" the pores of the structure preventing water seepage. Xypex is ideal for use on the "inside" of wet underground structures.

Xypex Chemical Co.

CIRCLE 156 ON INQUIRY CARD

Parallel Design Partnership, Limited



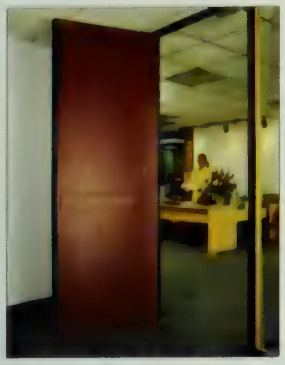
"ellen's brackets," an anodized-aluminum shelving system designed by M Ali Tayar, provides an elegant alternative to existing bracket-and-track systems. Cantilevered brackets come in two sizes, for shelves 3/4" or 3/8" thick and 10" deep. Wall-mounted tracks permit 1 1/2" adjustment of wood, glass or plexiglass shelves. For more info phone Parallel Design Tel: 212-989-4959 Fax: 212-989-4977.

Parallel Design

CIRCLE 157 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Applications

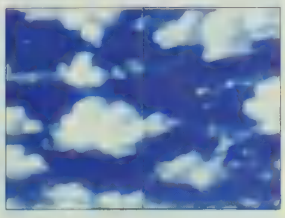


The new flush exit device is designed for use on TOTAL DOORS in single, pairs & double egress pairs. Ideal for corridor & elevator lobby applications in all commercial facilities. The exit device allows continuous, uninterrupted sight-lines in corridors when doors are pocketed in the open position. Its quiet operation is ideal anywhere noisy hardware is a problem. TOTAL DOORS can be retrofitted into existing door frames, saving time & expense.

Openings

CIRCLE 158 ON INQUIRY CARD

Pilkington Introduces New Solar Control Glass

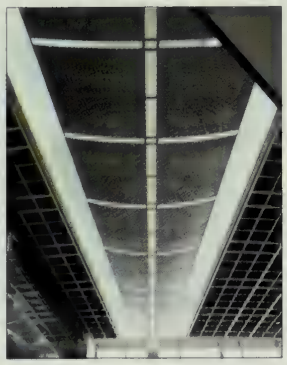


Pilkington Solar E™ Solar Control Low-E Glass – designed for solar and thermal control in clear IG units – is a solar control glass with a pyrolytic surface. Because it has a pyrolytic surface, Solar E Glass offers excellent lead times, is easily fabricated, bent, tempered, and has virtually unlimited shelf life. Unretouched image above comparing looking at a sky scene with Pilkington Solar E™ Solar Control Low-E Glass (right) and without glass (left).

Pilkington

CIRCLE 159 ON INQUIRY CARD

Aluma-Vault from Gordon, Inc.



Curved freeformed or vaulted, endless design options are yours with Aluma-Vault ceiling systems. Aluma-Vault is a 3-dimensional decorative ceiling that incorporates custom panels into a curved suspension system. This unique product utilizes the crisp aesthetics of extruded aluminum to create smooth runs of gently curved or undulating ceilings.

Gordon, Inc.

CIRCLE 160 ON INQUIRY CARD

NANZ



The No. 2006 is a Bauhaus handle based on a Walter Gropius design. Nanz manufactures this and a wide range of other levers, knobs, locks, hinges and cabinetry hardware. Fax a request for our free Product Selection Guide or our $20 catalogue featuring this and over seventy other handles. Phone 212-367-7000, fax 212-367-7375. www.nanz.com

Nanz Custom Hardware Inc.

CIRCLE 161 ON INQUIRY CARD

Xenon Luminaries

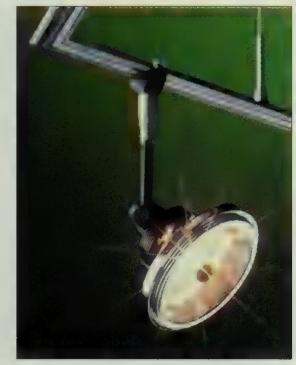


Space Cannon Illumination Inc. introduces the Litehose, the latest in linear lighting technology made of extruded, durable optical-grade acrylic. Available in different diameters and sizes, reflective paints and films are not required. The Focus is an architectural colored luminarie utilizing a 1200w lamp source designed to work with the Litehose or separately. 888-705-1028.

Space Cannon

CIRCLE 162 ON INQUIRY CARD

Boa Two-Circuit Track System



Bruck Lighting, the international leader in innovative low-voltage cable and track systems, introduces Boa, a low-voltage two-circuit track system with dual switching ability. Boa may be suspended or flush mounted, installed vertically or horizontally and is available in chrome or matte chrome. All Bruck Uni-lights fixtures can be utilized with Boa as well as all seven other Bruck track systems. www.brucklighting.com

Bruck Lighting Systems

CIRCLE 163 ON INQUIRY CARD

Ornamental Picket Fence with a Purpose



We have given special attention to each & every component of our fence. Every item is designed for strength, durability and low maintenance. No other company builds a complete fence — rail, rivets, brackets, pickets and posts, that is stronger, more durable, have more security or lower maintenance costs than our fences. Monumental Iron Works, 6500 Eastern Ave., Baltimore, MD 21224. Tel: 410-633-6500, Fax: 800-239-2963.

Monumental Iron Works

CIRCLE 164 ON INQUIRY CARD

Melton Classics



Melton Classics architecturally correct columns, balustrades, and architectural details, are the industry standard for quality and design. Columns are available in fiberglass, resin composite, GFRC, GRG and wood. MarbleTex™ Balustrades and columns are integrally Colored and require no painting. Ask us about our complete line of architectural ornamentation in Melton Stone™ cast stone. 800-963-3060, www.meltonclassics.com

Melton Classics

CIRCLE 165 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Timeless American Design ©2000 FLLWFDN

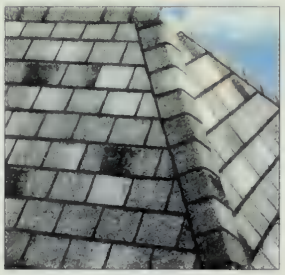


Taliesin®-1 Lamp, designed by Frank Lloyd Wright® in 1925. Taliesin®-Mini, adaptation of original design. Available in several finishes. Yamagiwa is the sole licensee of the FLLWFDN authorized to produce lighting. Other types, floor lamps, wall sconces, and pendants available. www.yamagiwausa.com PH: 800-879-8611, 31340 Via Colinas, #106, Westlake Village, CA 91362

Yamagiwa USA Corporation

CIRCLE 166 ON INQUIRY CARD

Hatteras®

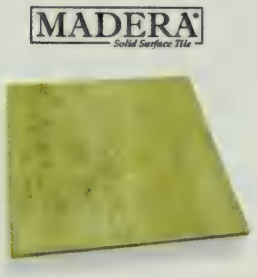


An oversized 18" x 36" fiberglass asphalt shingle designed to withstand hurricane force winds. Features a dramatic eight-inch exposure; deep one-inch shadow lines; seven colors; and a 40-year limited warranty, including 10-year warranty coverage against winds up to 110 miles per hour. UL certified to meet ASTM D3462 performance standards; Miami-Dade approved; algae resistant.

CertainTeed

CIRCLE 167 ON INQUIRY CARD

Matrix Composites Inc.

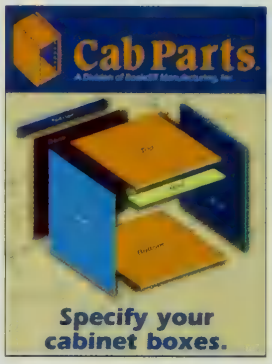


Chosen by a distinguished panel of Architects for Architectural Record as one of the best new finishes for 1999, Madera Tile is made from an exciting new material known as Lignasil®. Using 100% post-use hardwood in a patented process, Madera forges new ground in "green" building material technology. Several textures are available in an exciting range of solid colors and unique color blends for your sustainable design solutions. Call 800-767-4495. www.maderatile.com

Matrix Composites Inc.

CIRCLE 168 ON INQUIRY CARD

Specify This.



Did you know one of the most cost-effective ways to produce high-quality, frameless cabinet systems is CabParts? With over 1,500 sizes and types of cabinet boxes, CabParts are easily assembled to produce cabinet installations of superior quality. Precisely dimensioned, fixed pricing and high-density shipping mean you have more control over Division 6000 results than possible through alternatives. Call 970-241-7682 or visit our website for the full story. www.cabparts.com

CabParts

CIRCLE 169 ON INQUIRY CARD

Fireframes™



Technical Glass Products introduces Fireframes™ – fire-rated door and window frames with sleek, European styling. Fireframes™ allow large expanses of glass, and are well-suited to applications where aesthetics are important. Available in a Designer Series and a Heat Barrier Series, the doors and frames carry ratings up to 2 hours. For complete information call 800-426-0279 or visit www.fireglass.com

Technical Glass Products

CIRCLE 170 ON INQUIRY CARD

Metal Building Product Systems from Centria Int'l

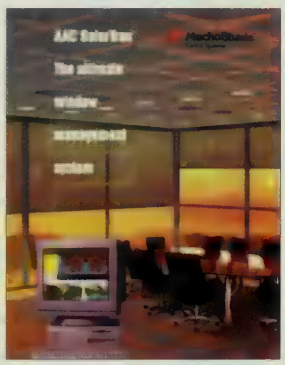


Centria Int'l is one of the world's leading suppliers of metal building product systems for architectural, commercial & industrial buildings applications. Our wall, floor & roof capitalize on the design freedom, durability & economy of metal structures while our team of engineers provide customized service at any project phase. No matter where in the world your next project may be located, rely on a century of experience from Centria Int'l. Visit www.centriaintl.com or call 800-759-7474.

CENTRIA International

CIRCLE 171 ON INQUIRY CARD

AAC SolarTrac™ Window Management System

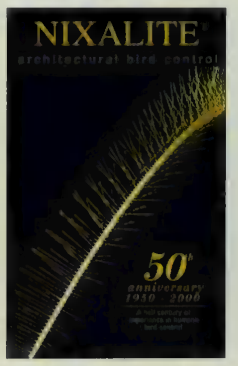


The AAC SolarTrac™ Window Management System tracks the sun to incrementally adjust ElectroShades® automatically and building wide, to optimize the shadecloth's solar protection and energy efficiency characteristics. AAC SolarTrac™, using a PC-based program, factors in the sun's angle of incidence, solar heat-gain, allowable solar penetration, brightness and glare control based on the building's specific location. 718-729-2020 or www.mechoshade.com

MechoShade Systems, Inc.

CIRCLE 172 ON INQUIRY CARD

Birds Take Flight From Nixalite!



Preserve architecture treasures with Nixalite bird control. Effective and humane, these stainless steel strips provide a protective barrier that is long lasting and inconspicuous. With the addition of Colorcoat™, a color powder coating option, Nixalite is almost invisible. For information, call 800-624-1189, Fax 309-755-0077 or visit our website at www.nixalite.com

Nixalite® of America Inc.

CIRCLE 173 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Projections by Clay Paky



Clay Paky Display Line projection systems are ideally suited for many types of applications including retail, exhibits, restaurants/bars, museums, banks, reception areas, showrooms, hotels and much more! These state of the art projection systems are user-friendly and compact with a wide range of available accessories. They are backed by a full two-year warranty and a team of lighting professionals committed to providing you with expert consultation and outstanding service. Call today for your free color brochure and video! (916) 939-6655 Email: michaelp@g1ltd.com

Group One, Ltd.

CIRCLE 174 ON INQUIRY CARD

Genuine Cedar Shakes

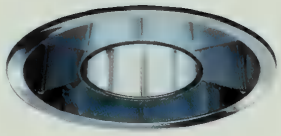


Cedar shakes have been a premium roofing material for centuries, & their combination of beauty & performance is unbeatable in terms of value for the dollar. As the most tested of all roofing materials, cedar shakes have proven durability, even under extreme conditions. For fire hazardous regions, such as California, Meeker offers factory treated shakes with FTX® fire retardant. These shakes can be applied using various systems to achieve a Class A, B, or C fire rating. Call 800-663-8761 or www.meekercedar.com

Meeker Cedar Products

CIRCLE 175 ON INQUIRY CARD

WILA Light-in-Light System



The WILA Light-in-Light system is available in two aperture sizes (10" & 15") & utilizes triple tube compact fluorescent lamps (18, 26, 32, & 42 watt) mounted vertically for maximum efficiency & even light distribution. The central concentrating reflector is computer designed for maximum efficiency & is formed of high purity (99.98 AL) aluminum with an inner finish of secular alzak & an outer finish of high reflectance powder coat white enamel which coincides with the finish of the broad beam outer reflector & cast trim ring.

WILA Lighting, LLC

CIRCLE 176 ON INQUIRY CARD

Site Furniture of Distinction



Keystone Ridge Designs, Inc. is the architect's choice for premier site amenities. Offering a full line of steel furnishings, we pride ourselves on exclusive designs and our patented powder coat finish, KEYSHIELD,™ that is unparalleled in the industry. Quality, craftsmanship, and dedication to your creative vision are the hallmarks of Keystone Ridge Designs. For more information please call 800-284-8208 or e-mail: KeystonRdg@aol.com. www.keystoneridgedesigns.com

Keystone Ridge Designs

CIRCLE 177 ON INQUIRY CARD

Decorative Grilles



Unusual visual effects emerge when our grilles are designed for area effects. Versatility is the theme. R&G offers architects and interior designers many ways to express the changing forms of metal with the integrity of R&G's architectural grilles. Custom or standard finishes are available plus any grille can be made in matching color to blend with your decor. 202 Norman Ave., Bklyn, NY 11222. 800-521-4895, Fax: 718-349-2611.

Register & Grille Mfg. Co.

CIRCLE 178 ON INQUIRY CARD

Unique Early Childhood Furniture



GRESSCO, Ltd introduces HABA® a new line of children's modular Loft furniture, shelving, platforms and room partitions in addition to our existing array of KinderSystem™ reading furniture. Now you can create a truly unique children's area in your hospital waiting room, day-care center, church or library. Call GRESSCO today for a FREE catalog at 800-345-3480, www.gresscoltd.com

GRESSCO Ltd.

CIRCLE 179 ON INQUIRY CARD

Protect Against Winter Ice & Summer Hail



For new construction or retrofit – RPI Ice Deflector protects HVAC, fans, condensers, skylights, piping, ductwork and other roof-or-ground-mounted equipment against damage from falling ice from towers, walls and adjacent buildings. Also protects against hail and wind during spring and summer thunderstorms. Structural curbs, equipment supports and adapters also available. Call RPI for solutions. 800-262-6669 www.rpi-curbs.com

Roof Products, Inc.

CIRCLE 180 ON INQUIRY CARD

ADA Insulation Safety Covers

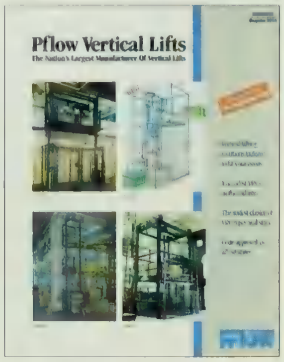


Plumberex Specialty Products, Inc. is the only company that manufactures a complete line of ADA safety covers for commercial & residential applications, meeting all building & fire codes with a -0- smoke rating. The Handy-Shield™ Safety Cover is the one and only ADA safety cover on the market with a "Dual" fastening system to help deter theft! For more information call 800-475-8629, Website: www.plumberex.com or email: plumberex@earthlink.net

Plumberex Products, Inc.

CIRCLE 181 ON INQUIRY CARD

Pflow Lifts Safely Move Materials Between Levels



Pflow Vertical Lifts transport materials between two or more levels. Designed for mezzanines, through floor, interior & exterior applications. Capacities from 10 lbs. to 100,000 lbs., vertical heights to over 200', carriage sizes to 30' x 30'. Mechanical, hydraulic and fully automated systems. guaranteed code approval. Call 414-462-8810 Fax 414-462-2673 www.pflow.com

Pflow Industries, Inc.

CIRCLE 182 ON INQUIRY CARD

Concord Horizon: The Commercial Accessibility Solution



The Horizon is one of Concord's fully enclosed elevators. Its innovative cable hydraulic drive system delivers reliable, quiet & smooth operation while serving two to six stops. The Horizon is the ideal commercial accessibility solution for the physically disabled. Standard features include emergency battery powered door operation & lowering, a slack cable safety device, & emergency cab lighting. For information, please call 800-661-5112 or visit us at www.concordelevator.com

Concord Elevator Inc.

CIRCLE 183 ON INQUIRY CARD

Concrete Information & Buyers Guide



Research 40 concrete topics: countertops, pavers, ICF's, pool decking, decorative, etc. Locate 78 concrete services/ products in over 200 US Metro areas in the buyers guide. Includes hard to find items such as fireplace surrounds, concrete animals, interior floors, play courts, site furnishings, slab jacking, etc. Free e-mail newsletter.

ConcreteNetwork.com

CIRCLE 184 ON INQUIRY CARD

Decorative, Thin-Film Intumescent Fireproofing

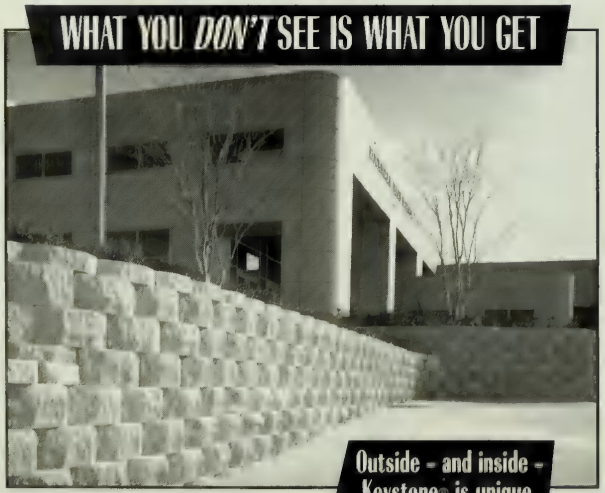


Improved spray characteristics & ratings up to 3 hours! A/D FIREFILM®II permits designers to use the appearance of exposed steel with the steel protected from fire. The product is applied as a thin-film coating 0.4 to 3.3 mm (16 to 130 mils) thick. When exposed to fire it expands to form a meringue-like insulating layer up to 4 in. thick. A/D COLORCOAT topcoat is available in a wide range of colours. Call 800-263-4087 or 416-263-4087. Internet: www.adfire.com See us in Sweets.

A/D Fire Protection

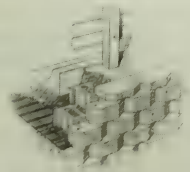
CIRCLE 185 ON INQUIRY CARD

WHAT YOU *DON'T* SEE IS WHAT YOU GET



Outside - and inside - Keystone® is unique.

KEYSTONE
The First To Last
800-891-9791



On the surface, Keystone® walls are beautiful. But inside each Keystone unit lies hidden beauty. When you're building walls that need to hold literally tons of soil mass, our patented fiberglass pin and geogrid system delivers inner strength and gives you that critical assurance. Design with Keystone and you'll design with confidence.

Internet: www.keystonewalls.com · E-mail: keystone@keystonewalls.com

CIRCLE 117 ON INQUIRY CARD

WHAT WAS THE POLSHEK PARTNERSHIP THINKING?

For an
out-of-this world
look inside the designers
of the Rose Planetarium
and more ...



CLICK
INTERVIEWS
ON
WWW. architecturalrecord.com

Revealing insights, ideas and inspiration from POLSHEK PARTNERSHIP, FRANK GEHRY, RICARDO LEGORRETA, SANTIAGO CALATRAVA and more ... *are just a click away.*

Don't miss a word. Find the complete text from exclusive *Record* interviews with leading architectural visionaries, plus profiles of intriguing artists and designers from a variety of media.

INTERVIEWS SPONSORED BY revit

ARCHITECTURAL RECORD
McGraw Hill Construction Information Group
A Division of The McGraw-Hill Companies


AIA Convention & Expo
News
Reference
PIAs
The
www.aiaonline.com
Member Directory
Web
for
Conferences
Free Project Leads
Architects
Product Information
Check it out–Today!
Classifieds
Continuing Ed
Employment
AIA ONLINE™
NETWORK
e-Architect • AIA/Fizzoz Bookstore • Architects Channel • AIA Convention & Expo • Preapproved Products
Audited by BPA International.
THE AMERICAN INSTITUTE OF ARCHITECTS

ASSISTANT PROJECT MANAGER STATIONS (DULLES)

00-0501-AH-AR

The Dulles Corridor Rapid Transit Project is in the preliminary engineering and NEPA phase. It is a 24 mile long phased implementation of Bus Rapid Transit to heavy rail in the Tysons Corner-Dulles Corridor in Northern Virginia. The position requires a senior design experienced professional, registered as a professional engineer, registered architect, or certified planner. The candidate must have hands on design experience of major projects which integrated with urban design issues such as land planning, zoning, vehicular and pedestrian access, and landscape. Transit oriented design experiences are critical, or similar experiences which can demonstrate the ability to manage a large professional consultant staff of many disciplines in the design of multiple facilities. The design issues will focus on the facilities required for the project. These include parking facilities, at grade or structured, ancillary buildings such as rail yard facilities, and multiple stations. The candidate must have demonstrated abilities to sketch or express ideas that will convey concepts for solutions to alternatives, and must also demonstrate abilities to lead and coordinate the concept designs for the facilities. Working experiences with the public in hearings and work groups and also with private developers is a must. The salary for this position is $66,997 to $100,497.

WMATA provides excellent medical and transportation benefits including a non-smoking environment. All applications/ resumes must include position title, position number, and salary requirements.

Applications/resumes must be received in the Office of Human Resources Management Planning.

Washington Metropolitan Area Transit Authority (WMATA)

Office of Human Resource Management & Planning

600 Fifth Street, NW

Washington, DC 20001

Fax: (202) 962-1180

EOE/M/F/D

POSITIONS VACANT

PROJECT MANAGER / ARCHITECTURE DESIGNER

Project Manager/Architecture Designer has duties to conduct client contacts and services for clients in the U.S. and Greece including commercial, residential, schools and other buildings, landscape and streetscape projects; Architectural design, research and development of projects; Presentation renderings; Cost estimating; Preparation of construction documents; Specification writing and editing; On-site field observation; Use of Greek language to speak with Greek clients and to review Greek language documents on a daily basis. 5% travel to Greece to visit client sites on an annual basis. Use of computer-aided design in designing architectural models. Must have Bachelor's degree in Architecture and one year of experience as a Project Manager/Architecture Designer or one year of experience as a Draftsperson or Architectural Designer. Applicant's experience must have included computer-aided design, landscape and streetscape design and school design and construction. Must read and speak Greek. 40 hours per week, 9:00 a.m. to 5:30 p.m. $ 36,046.40 per year. Applicant must show proof of legal authority to work in the U.S. NO CALLS – SEND TWO COPIES OF BOTH RESUME AND COVER LETTER TO ILLINOIS DEPARTMENT OF EMPLOYMENT SECURITY, 401 South State Street – 7 North, Chicago, Illinois 60605. Attention Leonard Boska; Reference # V-IL 22788-B, AN EMPLOYER PAID AD.

INTERN ARCHITECT

Intern Architect under supervision of licensed architect, will be responsible for preliminary architectural design, computer-aided drafting, and 3-dimensional conceptual computer modeling and animation; Develop analytic and quantitative computer models of sight-lines, visual fields, and traffic and pedestrian movements in buildings and cities using software packages such as Spatialist and Axman; Generate architectural details, free-hand sketches, and color rendering; Prepare schematics, design development drawings, and construction documents; Develop computer-aided statistical models of architectural design data. Require: Master's degree in Architecture. Must have a demonstrated ability to perform the stated duties as evidenced by portfolio. Salary: $32,000 per year, 8 am to 5 pm, M-F. Send resume to: Donna Byers, HR, Cooper Carry, Inc., 3520 Piedmont Rd., NE, Suite 200, Atlanta, GA 30305; Attn: Job MR

ARCHITECTURAL DESIGNER/DRAFTER

Lee & Sakahara Architects seeking Architectural Designer/Drafter with commercial, retail & hotel exp. Must have excellent presentation & AutoCAD skills. Full Med/Dental, 401(k) & profit sharing. Send resume to 16842 VonKarman Ave., #300, Irvine, Ca 92606 or visit www.leesak.com

ARCHITECTS WHY PROCRASTINATE?

The time to execute a calculated, advantageous career move for position, salary, family or geographical reasons is during an up business cycle not a down one! You know who we are; we've been in existence for over 30 years as recruiters exclusively of architects and engineers and currently represent more than 400 firms nationwide. We are former professionals ourselves, work on a strictly confidential basis and our client list and references are impeccable. If you are seeking a Project Architect, Project Manager, Design, Specifications, CADD, or Management position anywhere in the U.S. contact: Gregg Marshall, PE, RA @ G. Marshall Assoc., P.O. Box 66083, Chicago, IL 60666 or fax: (773) 736-1802 or e-mail: gmarshallassoc@hotmail.com with a resume and we will contact you at home in the evening to fully discuss your requirements.

MICHAEL LATAS & ASSOCIATES

Executive search and professional recruiting services. Serving the construction industry exclusively nationally and internationally since 1975.

Your premier source for executive, managerial, and difficult-to-fill professional-level needs. Contact our Architecture/Engineering Division.

MICHAEL LATAS & ASSOCIATES
1311 Lindbergh Plaza Center
St. Louis, MO 63132

(314) 993-6500 • Fax: (314) 993-0632
(800) 280-7811 ▪ http://www.Latas.com

LABARGE ENTERPRISES

REGISTERED ARCHITECTS AND ARCHITECT ENGINEERS' FOR DESIGN-BUILD PROJECTS IN TV-BROADCAST STUDIOS, HOSPITAL AND HEALTH CARE, E-COMMERCE BUILDINGS DATA PROCESSING AND CALL CENTERS AND TELECOMMUNICATION FACILITIES. POSITIONS NATIONWIDE — FAX 972-980-0090 WEBSITE WWW.HARDHATJOBS.COM

ARCHITECTS,ENGINEERS, INTERIOR DESIGNERS,CADD SPECIALIST

L. Robert Kimball & Associates, (www.lrkimball.com) a nationally acclaimed A/E firm, has immediate openings in its regional WEST CHESTER, PA office for experienced Architects, Designers and CaDD Specialists to design educational and institutional facilities. Positions require bachelor level degree min. 3 yrs. experience AutoCAD proficiency, interior design experience a plus. Additional opportunities for Mechanical and Civil Engineers, registration preferred. EOE, M/F/V/H Send resume to: Deborah C. Locke, Corporate Recruiter e-mail hmnres@lrkimball.com Fax: 814 472-7712, Mail: West Chester Position L. Robert Kimball & Associates, 615 W. Highland Avenue, Ebensburg, PA 15931

FOOD PROCESS ARCHITECT

McClier is a large, full-service Architecture/ Engineering Design Build firm headquartered in Chicago, with offices in Atlanta, San Francisco, Los Angeles, and New York. We currently seek a highly talented Food Process Architect for our CHICAGO office. The licensed architect we seek will possess a Bachelor's Degree in Architecture and a minimum of eight years experience in design and construction of food processing facilities. Experience must include ability to coordinate works of engineering disciplines, FDA/USDA requirements, thermal envelope design criteria, sanitary design principles, moisture barrier designs, and knowledge of food facility equipment. CAD capability using AutoCAD 14/2000. Please send resume and salary requirements to McClier, Attn: HR, 401 E. Illinois St., Chicago, IL 60611. Fax: (312) 373-7774. E-mail: hr@mcclier.com ▪ www.mcclier.com ▪ EOE M/F/D/V. No phone calls please.

ARCHITECTS - ALL LEVELS/ALL SPECIALTIES

JR Walters Resources, Inc. specializing in the placement of technical professionals in the A&E field. Openings nation wide. Address: P.O. Box 51214, Kalamazoo, MI 49005 Tel: (616) 381-5463 Fax: (616) 381-1141

ARCHITECTS – $40,000-$135,000

Key positions nationwide with leading A/E Regional and National firms. Management, design, staff and marketing positions. Highly Confidential! No fee! Group One Search, 639 N. 7th Str., Grand Junction, CO 81501. Tel: (970) 241-2499, fax (970) 241-2504, e-mail: grouponesearch@aol.com. Visit our website at www.grouponesearch.com today!

TO ADVERTISE: Call Ally Wingate at
T: 800-484-4042 ext.3042 — F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

URBANDESIGN

A ONE YEAR POST-PROFESSIONAL MASTER OF URBAN DESIGN DEGREE

THE UNIVERSITY OF MICHIGAN
TAUBMAN COLLEGE
OF ARCHITECTURE + URBAN PLANNING

INFORMATION AND APPLICATIONS AVAILABLE AT WWW.CAUP.UMICH.EDU
734 764 1300 TEL / 734 763 2322 FAX / URBANDESIGN@UMICH.EDU

Taubman College of Architecture + Urban Planning
University of Michigan

CHAIR OF ARCHITECTURE

The Chair is responsible for providing leadership; representing the program to the university, profession and public; coordinating instruction; advancing research and scholarship in the field; recruiting faculty and students; defining new program initiatives in consultation with faculty; managing the program budget; and teaching courses in architecture. The new Chair will be a tenured faculty member with a 12-month, administrative appointment. Chairs are appointed to three-year terms with opportunities for renewal. Candidates must have a distinguished record of professional, scholarly or creative achievement, as well as an interest in the integration of professional and theoretical issues in architecture.

TENURED or TENURE-TRACK FACULTY

The Architecture Program is seeking to appoint tenured or tenure-track faculty in Design, in Theory, and one or two in Structures. Applicants should have a professional degree (B.Arch., M.Arch., or its equivalent) and experience in practice or a record of research and scholarly work. The ability to contribute to doctoral studies is also desirable.

PROFESSOR OF PRACTICE

The Architecture Program is seeking to appoint one or two part-time or full-time Professors of Practice, at a rank equivalent to Assistant, Associate or Full Professor to teach design studio and related courses. Appointments are for two to five year, renewable terms. Applicants should have exceptional professional qualifications, with evidence of an exemplary practice commensurate with rank.

FELLOWSHIPS

The Architecture Program also offers three one-year teaching fellowships: the William Muschenheim Fellowship for individuals wishing to begin an academic career, the Walter B. Sanders Fellowship for experienced practitioners, and the Willard A. Oberdick Fellowship for individuals interested in building science and design. Fellows are expected to spend one academic year in residence.

Applicants should send a letter explaining their interest in the position, a curriculum vitae, and names of three references. Chair applicants should include a statement outlining their view of architectural education. Professor of Practice applicants should include a portfolio of their professional work. Fellowship applicants should include a portfolio and research proposal. Review of applications will begin November 1, 2000, with interviews planned for January through March 2001.

Send materials and address inquiries to:
Architecture Program Search Committee
Taubman College of Architecture + Urban Planning
2000 Bonisteel Blvd
Ann Arbor, MI 48109-2069

Visit our website: <http://www.caup.umich.edu/faculty/>

The University of Michigan is a non-discriminatory, affirmative action employer.

DESIGN ARCHITECT

Design Architect wanted by Design Architecture Firm in New York, NY. Must have Bach in Architecture & 3 yrs exp. NYS Architecture license reqd. Respond to: HR Dept, Rice Jones Architects, 54 West 39th St, 16th Floor, New York, NY 10018.

COLORADO

You know you want to.
The AIA Colorado Job Board. www.aiacolorado.org

ARCHITECTS NEEDED!

Senior Level Architects, are you interested in a career change or are you searching for better opportunities? Executive search and recruiting firm with 25+ years of experience in the architectural and engineering industry serving the nation's leading A/E firms. Please submit your resume to: CSS Search and Recruiting, Inc. c/o Heidi Lomprey, 115 5th Ave. S., Suite 501, La Crosse, WI 54601. Fax: 608-784-4904. Telephone: 608-784-4711. Email: css@csssearch.com. For a current list of our job openings, log on to our web site at www.csssearch.com

ARCHITECTURE

Accomplished, nationally recognized design firm focused on high-profile technology, corporate and leisure projects seeking a Project Architect, Job Captain and CADD Specialist with talent and artistry. AutoCAD 14 and excellent communication skills required. Career development provided within a creative and innovative studio environment. Terrific colleagues and beautiful offices on 16th Street Mall. Superior benefits, including 401K with 50% match, performance bonuses, and up to 5 weeks' vacation each year. Michael Barber Architecture, 303 Sixteenth Street, Suite 300, Denver, CO 80202; Attn: Lisa Del Campo, ldelcampo@mbarchitect.com or fax 303.595.7044.

www.architecturalrecord.com

ARCHITECT

New Media Architect to design exhibit kiosks, client promotional material and corporate Internet Site visual design. Must possess Bach in Architecture, Graphic Design or Industrial Design. Respond to: CCG Multimedia Inc, 460 West 34th Street, 7th Floor, New York, NY 10001.

ARCHITECTS

Architectural drafter wanted by architectural firm in New York, NY. Must have Bach in Architecture & 1 yr exp in job offered. Fax resumes to (212)941-8875. Attn: W. Ashworth.

INTERIOR DESIGNERS/ARCHITECTURE FURNITURE DEALERSHIPS

American Personnel specializes in corporate designers and furniture specialists, established since 1969, are in constant search for prospective employees, to fill our various job opportunities with our national clients. Project Managers / Ast. Project Mgrs / Sales Associates / Sales Asts. / AutoCAD Operators / Administrative Support / Entry-level Designers. Clients are based out of New York City, New Jersey, and other locations. For more details on our services, please feel free to call Frank Cassisa - Executive V.P., Ph: 212-233-2900, Fax: 212-233-3043 or after 7pm at 732-360-0655.

ARCHITECTURAL DRAFTER

Assist general contractor and/or architect in drawing specs for commercial/industrial/residential structures and in prep of schematic drawings for presentation. Prep precise drawings for review by GC and/or architect based on specific direction as to dimensions, materials, and other design parameters; modifies drawings as requested. BS in Architect or Architectural Engineering + 2 yrs exp in Architectural drafting or Architectural Eng. Send resume to Cal-city Construction, Inc. 16300 Downey Ave., Paramount, CA 90723. E-mail: woolim@cal-city.com

Synthetic Gypsum Wallboard

See what it can do for the environment...

& your next project

www.temple.com/green

Temple
Temple-Inland Company

COMPUTER SERVICES

Power, Functionality & Attention to Detail

FLATLAND



...Abundant 2D Tools; Easy to Learn and Use...
...Powerful and Useful...
Cadalyst Magazine, October 1996

Call (800) 247-2032 for Free Working Demo

FLATLAND 6... Serious Two Dimensional Drafting for Building Design Professionals

Ashcraft Architectural Computer Graphics
[illegible] Glen Street, Glens Falls, NY 12801 (518) 798-4631 (800) 247-2032

Circle 186 on Inquiry Card

SPECIAL SERVICES

GreenwayConsulting (800) 726-8603 www.GreenwayConsulting.com

Premier Research, Consulting and Publishing for A/E/C Entrepreneurs

DesignIntelligence

Receive a full year of DesignIntelligence (24 issues)—the industry's preferred management resource—for $199. DI presents fresh strategies for success, including trends, financial benchmarks, and management and marketing solutions. Call today for a free sample issue.

FACULTY POSITIONS VACANT

ASSISTANT/ASSOCIATE DIRECTOR AND DAYTON HUDSON ENDOWED CHAIR II IN URBAN DESIGN
DESIGN CENTER FOR AMERICAN URBAN LANDSCAPE
UNIVERSITY OF MINNESOTA

The Design Center for American Urban Landscape (DCAUL), University of Minnesota, seeks applications for position of Dayton Hudson Chair II and assistant/associate director. Appointment holds title of assistant or associate professor. Appointment begins August 27, 2001. Assistant/associate director position is academic administrative, 12-month, 100%-time, five-year renewable contract. Associate/assistant professor position is 9-month, tenured or tenure-track faculty appointment. Responsibilities: managing projects, arranging contracts, fundraising, grant development, staff hiring, and implementing certificate program. Essential qualifications: professional graduate degree in architecture or landscape architecture, degree or experience in urban design, and ability to interact effectively with a diverse group of people. Information about DCAUL and full position description are available online: www.cala.umn.edu/design_center/dcaul.html Position is open until filled. Application screening will begin on December 16, 2000. Send letter of interest, CV, portfolio of design projects and/or samples of written work, and names of three references to: Jennifer Downes, Design Center for American Urban Landscape, Suite 222, 1313 Fifth Street S.E., Minneapolis, MN 55414-1546 The University of Minnesota is an equal opportunity educator and employer.

UNIVERSITY OF OREGON
FACULTY POSITIONS

The Department of Architecture at the University of Oregon seeks thoughtful, skillful, and effective faculty members for three or four tenure-track positions at the rank of assistant or associate professor. Successful applicants must be able to demonstrate the promise of effective and inspiring teaching in architectural design studios and specific subject area courses. Candidates are expected to have well-defined research, scholarship, or creative practice interests with a commitment to sustained inquiry into emerging issues in the field. They must be proficient at nurturing creative inquiry by students, promoting integrative design exploration in both subject area classes and studios. For all positions, the normal teaching load will be five courses per academic year, distributed over three 10-week terms. These include regular involvement at all level of the architectural design studio program and leadership in required courses in the specific subject area of emphasis. All faculty anticipate the opportunity to teach a seminar of choice as part of the annual, five-course rotation. The successful candidates should show promise to actively pursue extra-mural funding for projects resulting in publications or buildings. Architectural Design + Digital Media: The Department is seeking candidates to explore the role of digital media in the design process, with a particular emphasis on effective and appropriate applications within a comprehensive architectural design studio. The use of digital media to support inquiry into spatial ordering, building construction, or other architectural subject areas is also encouraged. The successful candidate will be expected to teach introductory digital media courses to undergraduate and graduate students, design studios at all program levels, and advanced courses. Architectural Design + Environmental Control Systems: The Department is seeking candidates who have broad environmental interests while bringing focused attention and capability to teach the integration of ECS topics (thermal, luminous, acoustic, etc.) in a studio setting. The successful candidate will join a very distinguished tradition of research and creative inquiry in the teaching and research in ECS. This position requires co-teaching of large introductory lecture courses in environmental control systems, as well as advanced topical courses and design studios at all levels. Architectural Design + Structures: The Department is seeking candidates for one or possibly two positions in architectural design and structures that address the synthesis of structure and architecture in their teaching, research and/or creative work and have a strong interest in helping students learn to integrate structural principals into architectural design. This position(s) involves teaching required courses in the one-year structures sequence and architectural design studios at the graduate and undergraduate levels. Teaching expectations for this position includes co-teaching two of the required structures courses each year, design studios, and the opportunity for one advanced elective. Qualifications: 1. A terminal degree in architecture or related field is required. 2. Demonstrated potential to engage in integrative, scholarly work and to disseminate the results. 3. Previous teaching experience is desired. 4. Professional experience in architecture or a related field is an asset. Applications should include: 1. A curriculum vita and a narrative, 1-2 page description of your background, interests, qualifications for the position, and your intentions for seeking this position. Include a discussion of your views about teaching and your long-range plans for research/creative practice. 2. A portfolio (15 pages maximum) that includes representative examples of teaching and creative/scholarly work. a. Discipline-related course: course descriptions, syllabi and examples of student work; b. Design studio: program statements, syllabi and examples of student work; c. Suggestions and descriptions for classes that you are qualified to teach; d. Representative professional/ scholarly work and related publications. 3. A list of at least three references with their addresses, telephone numbers, and e-mail addresses. Complete applications and/or inquiries should be addressed to: Nancy McNaught, Office Manager, Faculty Search Committee, Department of Architecture, School of Architecture and Allied Arts, University of Oregon, Eugene, Oregon 97403-1206, tel. 541-346-1435; fax. 541-346-3626 DEADLINE FOR RECEIPT OF APPLICATIONS AND ALL MATERIALS: Review of applications will begin on November 15, 2000 and continue until complete. In order to be assured of consideration, it is recommended that all materials be received by the November 15 date. In addition to the tenure-track appointments, we are seeking a pool of applicants for two one-term distinguished visiting professor positions: The Fredrick Charles Baker Professor in Lighting and Architectural Design and the Pietro Belluschi Professor in Architectural Design. Please send nominations and inquiries to the department. The University of Oregon is an equal opportunity, affirmative action institution committed to cultural diversity and compliance with the Americans with Disabilities Act. Women and minorities are encouraged to apply.

OFFICIAL PROPOSALS

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY
REQUEST FOR PROPOSALS TO PROVIDE DESIGN/BUILD SERVICES FOR THE WORLD TRADE CENTER ON AN "AS-NEEDED" BASIS

The Port Authority of New York and New Jersey (The Port Authority) is seeking corporations, partnerships, joint ventures and other entities ("firms") to respond to a Request for Proposals (RFP) to provide complete design and construction services for the World Trade Center on an as-needed basis. The Design/Build approach will be used primarily to develop standard office spaces in the World Trade Center with a minimum of special features. Some jobs may also require special finishes. Most Design/Build work is expected to affect less than 5,000 square feet of space, although any single job may involve anywhere from 1000 to 40,000 square feet of space. The value of Design/Build work undertaken at the World Trade Center is expected to range up to $3,000,000 annually. Proposals will be considered from firms that can demonstrate recent experience in providing Design/Build services for the development of offices and other spaces in commercial, hi-rise building complexes. Firms that have such experience are encouraged to respond to the RFP. The proposal information is set forth in the document entitled "The Port Authority of New York and New Jersey – The World Trade Center. Contract No. WTC-458.00. Request for Proposals for Design/Build Services for the World Trade Center." A copy of the RFP will be furnished to interested firms upon request made in person or via mail to the Port Authority of New York and New Jersey, One World Trade Center, Contract Desk, Room 72E, New York, NY 10048. Firms planning an in-person pick-up of the RFP are advised to call 212-435-7420 to insure availability. Proposals will be received through Monday, October 16, 2000. Questions by prospective responders concerning this RFP may be directed to Mr. Eli Moscovitz, Project Manager, at 212-435-3188.

RENDERINGS

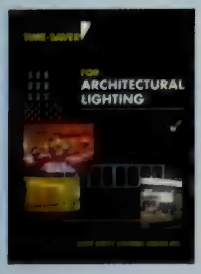
ARCHITECTURAL RENDERINGS

Fortune 500 clientele, Watercolor: 11" x 17" $1,499 + tax, 3 days. 12" x 22", $2,899 + tax, 5 days. Visa, MC, AmEx. Mayron Renderings, (212) 633-1503 or (800) 537-9256. Visit www.mayronrend.com

ARCHITECTURAL RECORD: (ISSN 0003-858X) Vol. 188, No. 10. Published monthly by The McGraw-Hill Companies, 1221 Avenue of the Americas, New York, N.Y. Periodicals postage paid at New York, N.Y. and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 246565. Registered for GST as The McGraw-Hill Companies, GST No. R123075673. **POSTMASTER:** *Please send address changes to* ARCHITECTURAL RECORD, Fulfillment Manager, P.O. Box 566, Hightstown, N.J. 08520. **SUBSCRIPTION:** Rates: U.S. and Possessions $59; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $8; for foreign $10.



Time-Saver Standards for Building Materials and Systems
Design Criteria and Selection Data
Donald WATSON, Editor-in-Chief
May 2000 | 0-07-135692-4 | $150.00



Time-Saver Standards for Architectural Lighting
Gary STEFFY Lighting Design Inc.
July 2000 | 0-07-061046-0 | $150.00



Time-Saver Standards for Architectural Design Data, 7e
Donald Watson
1998 | 0-07-068506-1 | $150.00

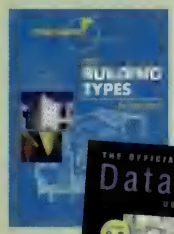
McGraw-Hill Architecture

designing INTELLIGENT SOLUTIONS

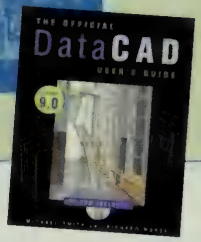
attention | ARCH RECORD READERS

october is "FALL SAVINGS" MONTH AT Amazon.com Purchase any title from the McGRAW-HILL ENGINEERING BOOKSTORE and receive a 20% discount!!

COMING THIS FALL!



Time-Saver Standards for Building Types, 4e
Joseph DE CHIARA and Mike CROSBIE
0-07-016387-1 | $150.00



The Official DataCAD User's Guide
Michael SMITH and Richard MORSE
0-07-136356-4 | $49.95 (Paperback/CD-ROM)



The Color of Cities
Lois SWIRNOFF
February 2000 | 0-07-063348-7 | $69.95



Dictionary of Architecture & Construction, 3e
Cyril M. HARRIS
February 2000 | 0-07-135178-7 | $69.95



Office Space Planning
Design for Tomorrow's Workplace
Alexi MARMOT and Joanna ELEY
July 2000 | 0-07-134199-4 | $59.95

For great service, discounts and to learn more about our architecture titles, visit the McGraw-Hill Engineering Store on Amazon.com:
http://www.amazon.com/mcgraw-hill

McGraw-Hill
A Division of The McGraw-Hill Companies

amazon.com

CIRCLE 118 ON INQUIRY CARD



Muralist Anthony Benton Gude: following in a tradition



Interviewed by Charles Linn, AIA

As you visit Anthony Benton Gude's Kansas farm, you may think you have gone back a few years. The spic-and-span prairie retreat has changed little since Gude's grandfather, Thomas Hart Benton, a painter and muralist known for his dramatizations of American life, bought the farm with the proceeds from a painting he did while visiting here, looking for a place for his daughter to live. His grandson grew up watching his grandfather work, observing the way he brought his subjects to life, and carries on his work.

Q: *Did you know your grandfather well?* Oh yes. We spent summers at Martha's Vineyard with him, from the time I was small I used to sit beside him and watched him paint. I don't think I made any conscious attempt to imitate him, but I definitely absorbed what I saw. He painted from sketches, and also from clay models, which were painted in approximately the colors that he would use when he painted them on canvas.

You've always been a very realistic painter. Did your teachers ever push you to work more abstractly? When I got to art school in Boston, I kept it a secret that I was the grandson of this famous artist, but I was lucky. The teachers there let me work on my strengths, although it was a bit frustrating too. I didn't want to continue doing what I already did well. My favorite class was with a professor who taught us classical painting: how to make the paints, gessoes, impastoes, glazes, varnishes, and how canvas was stretched and primed, but also to underpaint in monochrome before applying color, so the effects of shade, shadow, and value could be seen. I still paint this way.

How do murals affect architecture, like the one in the lobby of Western Resources in Topeka, Kansas? The spaces are like an empty museum gallery, with white walls and a stone floor. The mural tells the story of the people who brought, and bring, electric power to the state. It is a source of great pride for those who walk by it every day. I based it on historic photographs of these people doing their jobs. The greatest respect that I could show them was to study very carefully at what it is that they have accomplished and to show them that I understand it. ■

Portrait photograph by Charles Linn


Experience isn't just measured in years. It's also gauged
by performance. Quality. Flexibility.
And the passion to continually raise the bar.
These are the qualities that define the Kawneer window.
Our patented IsoLock® thermal break uses Kawneer's
exclusive lanced pour and debridge process to combine
THE KAWNEER WINDOW.
FROM EXPERIENCE COMES ILLUMINATION.
energy savings with structural integrity. An advanced
vent and frame design retards air and water infiltration.
A wide palette of protective coatings and painted finishes
combines beauty with lasting durability.
And our tradition of close collaboration
early in the design stage assures a successful
marriage of form with function for architects
and building owners alike. The Kawneer window.
Let our experience bring your brightest ideas to life.
For architectural product applications and technical assistance,
contact our architectural services team toll free at
Kawneer
The Mark of Responsibility
CIRCLE 119 ON INQUIRY CARD
© 2000 Kawneer Company, Inc. An Alcoa Company. Technology Park/Atlanta
Guthridge Court Norcross, Georgia 30092 770/449-5555

Kroin

180 Fawcett Street
Cambridge, Massachusetts 02138

Telephone 800 OK KROIN
Telefax 617 492-4001

Kroin polished stainless steel basins are complemented by Kroin sanitary fittings in 18 masterful colors.

Design: Professor Arne Jacobsen, MAA
Selected for the Design Collection, MoMA.

For information Circle 100.



ectural Record
November

3 9042 05166760 5

ITECTURAL RECORD

ifficult Beauty
Taking a Look at Architecture's Wild Side

Greg Lynn and the Challenge of Animate Form

The Crazy Everyday of Branson Missouri

Building Types Study: Architecture for Entertainment

BURLINGAME
NOV 21 2000
LIBRARY


Spot the two terms
that don't go together:
1. Suspended Ceiling
2. Grid-hiding Visual
Until now.



CEILING SYSTEMS

[Between us, ideas become reality.™]



Introducing Optima Vector™, the revolutionary new acoustical ceiling with virtually no visible grid.

With Optima Vector, now you can achieve a clean, nearly monolithic look in a downward access suspended ceiling. That's because the unique Vector* edge detail provides a sleek ¼" reveal that minimizes the existing grid. In fact, the larger the expanse of open plan ceiling, the more effectively the grid disappears, leaving you with a grid-hiding, upscale visual. It works with existing standard 15/16" grid systems, which makes it perfect for renovations – avoiding costly, time-consuming grid removal, replacement or repainting. And because Optima Vector is a high performance open plan ceiling, you can count on superior sound absorption, light reflectance and durability.

Suspended ceiling. Grid-hiding visual. Now together, from Armstrong.

For more information, call 1-888-CEILINGS or visit our website at www.ceilings.com

*Patent Pending

Armstrong

CIRCLE 1 ON INQUIRY CARD

UNION MASONRY CRAFTWORKERS, CONTRACTORS & CONSULTANTS

When the Chicago Police needed new headquarters, they put Team IMI in the line-up.

Every construction project requires teamwork. Not only among the architects, developers and trades, but especially between the contractors, craftworkers and consultants. Team IMI is the union of these three partners. Our goal is to ensure that you always have enough of the world-class union craftworkers and contractors you need to complete your project—no matter how big, how elaborate or how visionary it may be. Our promise is that we do every job with a sense of pride and accomplishment unmatched in the masonry industry.



Team IMI's involvement with the Chicago Police Department's new 1st District Police Headquarters began when Team IMI convinced city officials of the value and benefits of masonry. The concept was to design and create a prototype masonry building of 45,000 square feet, adaptable to 130,000 square feet, to accommodate the various buildings planned for the future. To date, 11 new police stations are being built on this model. At the design phase, architects from VOA and OWP&P attended Team IMI seminars on masonry design and detailing. During construction, when a problem arose regarding limestone cleaning, Team IMI was quick to provide the technical information needed. Team IMI's staff of architects, engineers and construction consultants was also able to provide a comprehensive package of masonry-related technical services. In the end, the Public Building Commission was very pleased with the work, and the Chicago Police Department stated that the building surpassed all expectations.

Of course, the Chicago Police Department's 1st District Headquarters prototype building is just one example of how Team IMI is making a real impact in the masonry construction industry. Thanks to comprehensive training programs at IMI's National Training Center and around the country at satellite centers, Team IMI is helping to meet the need for skilled union craftworkers and contractors nationwide. Team IMI mobile training units also make it possible to offer specialized training on your job site. And our technical expertise in codes, specifications and design troubleshooting delivers the final piece of the puzzle. In short, with Team IMI, you're assured that the world's best union masonry craftworkers and contractors will always be available for your project, ensuring quality and imagination every step of the way. **To find out more, call 1-800-IMI-0988 or visit www.imiweb.org.**



team IMI
UNION MASONRY CRAFTWORKERS
CONTRACTORS & CONSULTANTS

The International Masonry Institute (IMI) is supported by the International Union of Bricklayers and Allied Craftworkers and the contractors who employ them in the U.S. and Canada.


Colorful.
Big city architect. Lover of nature. Massimo Fucci is a study in contrasts. Taking inspiration from walks in the Italian countryside, Massimo transformed a typical corporate office outside Milan into a sophisticated, yet playful environment. He mixed the bold colors and easy workability of DuPont Corian® solid surface with other materials to create sweeping curves, wide open spaces, and an overall sense of vitality. Massimo says his goal is to interrupt monotony. It appears he's on the right path. To see the 80-plus colors of Corian® solid surface, visit www.corian.com.
CORIAN®
SOLID SURFACES
DUPONT
CIRCLE 2 ON INQUIRY CARD
Shown in Lilac, Sun, Everest, Black Quartz, Pyrenees and Midnight. Corian® is a DuPont registered trademark. Only DuPont makes Corian.

ARCHITECTURAL RECORD

11.2000



News

33 Renzo Piano takes Manhattan

34 Plan presented to reopen Pennsylvania Ave.

Departments

19 Editorial: Show me your tattoo

26 Letters*

53 Correspondent's File: Portland *by Suzannah Lessard*

57 Practice Matters: Reducing liability *by Jeffrey L. Kinzier*

63 Critique: Aesthetics and the city *by Robert A.M. Stern, FAIA, Michael Kwartler, FAIA, and Suzannah Lessard*

73 Snapshot: Pika Pika Pretzel *by Naomi Pollock, AIA*

264 Profile: Mariko Mori *by Ingrid Whitehead and Clifford Pearson**

Features

78 The Easier Beauty of Animate Form *by Ann Bergren*
Greg Lynn's projects challenge our assumptions about aesthetics.

86 Wish You Were Here *by Charles Linn, AIA*
Timothy Hursley's photographs show us the theatrical and sometimes corny beauty of Branson, Mo.

Projects

95 The Difficulty of Beauty *by Suzanne Stephens**
It's tough to find, and even tougher to evaluate. But at the end of the day, are we shortchanged without beauty?

100 San Angelo Museum of Fine Arts, *Texas* *by David Dillon**
HHPA
Intentionally dissonant, this museum is both quirky and bold.

105 RMIT Storey Hall, *Melbourne* *by David Clark**
Ashton Raggatt McDougall
With an outrageous facade, Storey Hall jazzes up its setting.

112 Italian Chancery, *Washington D.C.* *by Cynthia Davidson**
Sartogo Architetti Associati, Rome
A muscular embassy building both handsome and strange.

120 Windsor Town Hall, *Vero Beach, Florida* *by Beth Dunlop**
Leon Krier, with Merrill and Pastor Architects
A picturesque, vernacular town hall and chapel makes the old new.

126 Sony Center, *Berlin* *by James S. Russell, AIA**
Murphy/Jahn
Technology-driven urban bravura in Berlin's Sony Center.

WWW * You can find these on our Web site at www.architecturalrecord.com, your source for more information on projects, Web-only weekly features, more.

Building Types Study 791

139 Entertainment: Theme Sprawl *by Clifford A. Pearson**
Themed environments are spreading over the landscape.

142 Cinémathèque Québécoise, *Montreal* *by Beth Kapusta**
Saucier + Perrotte Architectes

148 Autostadt, *Wolfsburg, Germany* *by Claudine Weber-Hof**
HENN Architekten Ingenieure

154 Point Edward Charity Casino, *Ontario* *by Beth Kapusta**
Dunlop Farrow Architects

159 Desert Passage, *Las Vegas* *by Clifford A. Pearson**
RTKL Associates

Building Science & Technology

165 Future-proof design for a new building type
*by Wendy Talarico**

175 Tech Briefs

179 Digital Architect: Netiquette *by Jerry Laiserin, FAIA**

Lighting

191 Introduction *by Charles Linn, AIA*

193 Creative Uses

196 The New 42nd Street Studios *by William Weathersby, Jr.*
Choreographed illumination creates theater at a rehearsal center.

204 Niagara Mohawk Power Corporation *by Charles Linn, AIA*
A restored Art Deco icon returns the power of light to Syracuse.

211 H.R. Owen Ferrari Showroom *by Nayana Curimbhoy*
Shapely columns and circles of light at a London car showroom.

217 Lighting Technology *by Lindsay Audin*

222 Lighting Resources

Products

227 Solar building products

231 Product Briefs

236 Product Literature

7 What's at architecturalrecord.com

241 Dates/Events*

244 AIA/CES Self-Report Form*

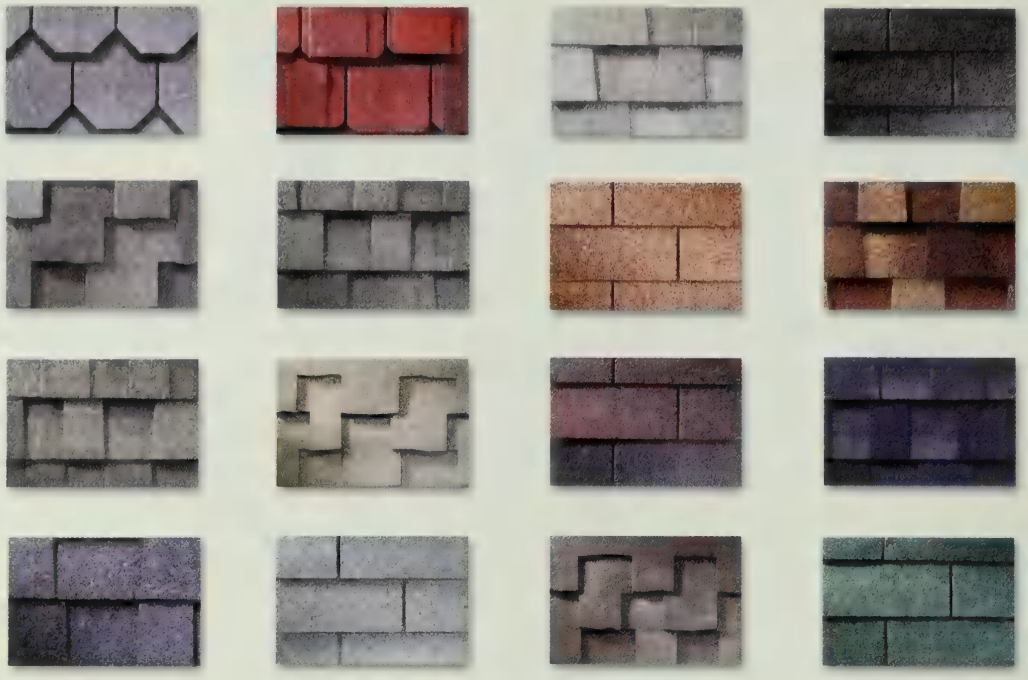
248 Reader Service*

250 Manufacturers' Spotlight

262 Classified Advertising*

The AIA/Architectural Record continuing-education opportunities are "Future-proof design for a new building type" [page 165]; "Designing with Daylight," sponsored by Hunter Douglas [page 182]

Cover: *Storey Hall, by Ashton Raggatt McDougall. Photograph by Tim Griffith/ESTO*
Above: *Italian Chancery, by Piero Sartogo. Photograph by Alan Karchmer.*



At least the insulation is a no brainer.

Decisions. Decisions. Decisions. Selecting what looks and works best for your customers is a big part of your job. This can get a little mind-boggling considering all the choices you have out there.

At least with STYROFOAM* brand insulation, your choice for rigid insulation is easy. It's the brand professionals continually choose over other comfort and energy-saving options. Not only because it's a proven performer, but also because using it results in a well-built, energy-efficient structure. So when it comes time to think about your best insulation choice, don't give it another thought. Choose BLUE.†

DOW

Styrofoam
Brand Insulation

The Preferred Choice!

www.styrofoam.com

*Trademark of The Dow Chemical Company
†The color BLUE is a Trademark of The Dow Chemical Company

CIRCLE 3 ON INQUIRY CARD

Go To WWW.architecturalrecord.com

ews
rojects
eatures
gital architect
een architect
siness week/
chitectural
ord awards
erviews
ialogue
litorial
m the field
ters
rtual
rchitect
ord houses
ntinuing
ducation
cruitment
dvertisers/
roducts
rofessional
irectories
bout record
dex
bscribe
dvertise
op record
bmit an article
ditorial calendar
nail policy
ivacy policy
ntact us
vents
ite map
ome

Mark your calendars....

Mondays: *Architectural Record* ARCHives

Every Monday in November, log on for **'Architectural Aberrations'** - a popular series from the early days of *Record* in which editors highlight a unique or provocative building.

Wednesdays: New 'Green' features in Green Architect

Nov. 1. How Fluorescent Lights Help Save Energy.

Mondays: Architectural Book & Media Review

Book reviews: *Saving America's Treasures, Green Architecture, Architecture and Identity.*



Daily News

Get the latest scoops from the world of architecture.

From The Field

Tune in regularly for the latest buzz from *Record* editors.

Interviews



Brendan MacFarlane, one of the architects of Georges restaurant, talks about working inside a classic building, in a classic city: Paris. Plus, a stimulating interview with young architect, **Tina Lai.**

sponsored by revit

Lighting



Introducing the new Lighting project section with a Quicktime video of the theatrical lights on Anne Mitello's 42nd Street Studios Building. Plus links to people and products involved in lighting projects.

Green Architect

Find web-only 'Green' product reviews, links to manufacturers and weekly features on green projects and issues. **New weekly 'Green' features every Wednesday.**

Projects

Find links to people and products involved in November projects: Amusement BTS, Project Portfolio. sponsored by buzzsaw.com

Earn CES Credits Online

Read *Record's* **building science** features/ continuing education self-study courses and **file online for CES credits.**

Digital Architect

Connect to related high tech resources through web-only IT Vendor Guides and software reviews with links to manufacturer web sites. Find current and past coverage. This month's column: **'Netiquette' - email protocol.**

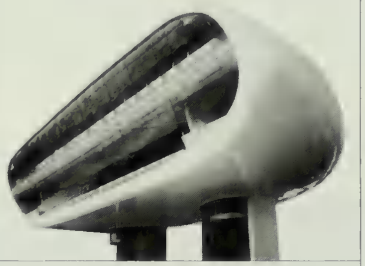
sponsored by autodesk

Recruitment

Career opportunities for architects and related professionals, from firms and universities nationwide.



The NatWest Media Centre, Lord's Cricket Ground, UK
Architect: Future Systems
Photographer: Richard Davies



At the RIBA, A always comes before B

We might be known as the Royal Institute of British Architects, but the RIBA doesn't define itself by national borders. Why should it? The RIBA is one of the most interactive and communicative organisations in the world. Its enviable Ribanet Conference service provides an exclusive e-forum to share information and advice between 28,000 architect members worldwide, and a linked website at www.architecture.com gives you all the essential information from the RIBA Library catalogue to the latest architectural news.

At its heart, the RIBA encourages international dialogue and co-operation between its unique and invaluable network of members. So, even if you're working late again, or trapped in a project miles from civilisation, RIBA is always there.

Full architect members of the AIA are eligible to join the RIBA, call +44 20 7307 3650 or email membership@inst.riba.org for more information.

Corporate membership
www.architecture.com

CIRCLE 4 ON INQUIRY CARD

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Robert Ivy, FAIA
MANAGING EDITOR	Ingrid Whitehead
DESIGN DIRECTOR	Anna Egger-Schlesinger
SENIOR EDITORS	Charles Linn, AIA Clifford Pearson Sara Hart Sarah Amelar
NEWS EDITOR	John E. Czarnecki, Assoc. AIA
PRODUCTS EDITOR	Rita F. Catinella
COPY EDITORS	Elizabeth Kugler, Lisa Rosman
WEB CONTENT EDITOR	Kevin Lerner
ASSOCIATE ART DIRECTOR	Kristofer E. Rabasca
ASSISTANT ART DIRECTOR	Clara Huang
PRODUCTION COORDINATOR	Juan Ramos
WEB PRODUCTION SPECIALIST	Laurie Meisel
EDITORIAL SUPPORT	Linda Ransey, Randi Greenberg

EDITOR AT LARGE	James S. Russell, AIA
SPECIAL CORRESPONDENT	Suzanne Stephens
ILLUSTRATORS	Muriel Cuttrell, Kira Eng, I-Ni Chen
CONTRIBUTING EDITORS	Robert Campbell, FAIA, Andrea Oppenheimer Dean, David Dillon, Lisa Findley, Blair Kamin, Jerry Laiserin, FAIA, Nancy Levinson, Lee Mitgang, Robert Murray, Sheri Olson, AIA, Nancy Solomon, AIA, Michael Sorkin, Tom Vonier, AIA, William Weathersby, Jr.
INTERNATIONAL CORRESPONDENTS	David Cohn, Claire Downey, Tracy Metz, Naomi R. Pollock, AIA
SPECIAL SECTION EDITORS	Jane Kolleeny, Elizabeth Harrison Kubany

SPECIAL PROJECTS	Charles Pinyan, Paul Herrmannsfeldt
RESEARCH DIRECTOR	John Conkling
DIRECTOR OF PROMOTION	Deborah Smikle-Davis
FINANCE	Michael Florek, Shlomo Messinger
CIRCULATION	Maurice Persiani, Brian McGann
ADVERTISING PRODUCTION MANAGER	Stephen R. Weiss
ADVERTISING DIRECTOR	David Johnson
VICE PRESIDENT/PUBLISHER	Elaine Shusterman

EDITORIAL OFFICES: 212/904-2594 Editorial fax: 212/904-4256 E-mail: *rivy@mcgraw-hill.com.*
Two Penn Plaza, New York, N.Y. 10121-2298
WEB SITE: www.architecturalrecord.com
SUBSCRIBER SERVICE: 877/876-8093 (U.S. only). 609/426-7046 (outside the U.S.). Subscriber fax: 609/426-7087.
E-mail: *p64ords@mcgraw-hill.com.* AIA members must contact the AIA for address changes on their subscriptions.
800/242-3837. E-mail: members@aia.org.
INQUIRIES AND SUBMISSIONS: Letters, R. Ivy, *rivy@mcgraw-hill.com*; Lighting, C. Linn, *linnc@mcgraw-hill.com*; Books, C. Pearson, *pearsonc@mcgraw-hill.com*; Record Houses and Interiors, S. Amelar, *sarah_amelar@mcgraw-hill.com;* Practice, E. Kubany, *elizabeth_kubany@mcgraw-hill.com*; Products, R. Catinella, *rita_catinella@mcgraw-hill.com;* News, J. Czarnecki, *john_czarnecki@mcgraw-hill.com;* Web Editorial, K. Lerner, *kevin_lerner@mcgraw-hill.com*

SUBSCRIPTION: Rates are as follows: U.S. and Possessions $59; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $8; for foreign $10. Subscriber Services: 888/867-6395(U.S. only); 609/426-7046 (outside the U.S.); fax: 609/426-7087.
SUBMISSIONS: Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage.
SUBSCRIPTION LIST USAGE: Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, N.J. 08520.
OFFICERS OF THE MCGRAW-HILL COMPANIES: *Chairman, President and Chief Executive Officer:* Harold McGraw III. *Executive Vice President and Chief Financial Officer:* Robert J. Bahash. *Executive Vice President, Organizational Effectiveness:* Barbara B. Maddock. *Executive Vice President, Global Markets:* John D. Negroponte. *Senior Vice President and General Counsel:* Kenneth M. Vittor. *Senior Vice President, Corporate Affairs, and Assistant to the President and CEO:* Glenn S. Goldberg. *Principal Operating Executives:* Leo C. O'Neal, *President, Standard & Poors;* Vasant Prabhu, *President, Information and Media Services;* Robert E. Evanson, *President, Educational and Professional Publishing Group.*
MCGRAW-HILL CONSTRUCTION INFORMATION GROUP: Norbert W. Young, Jr., FAIA, *President*

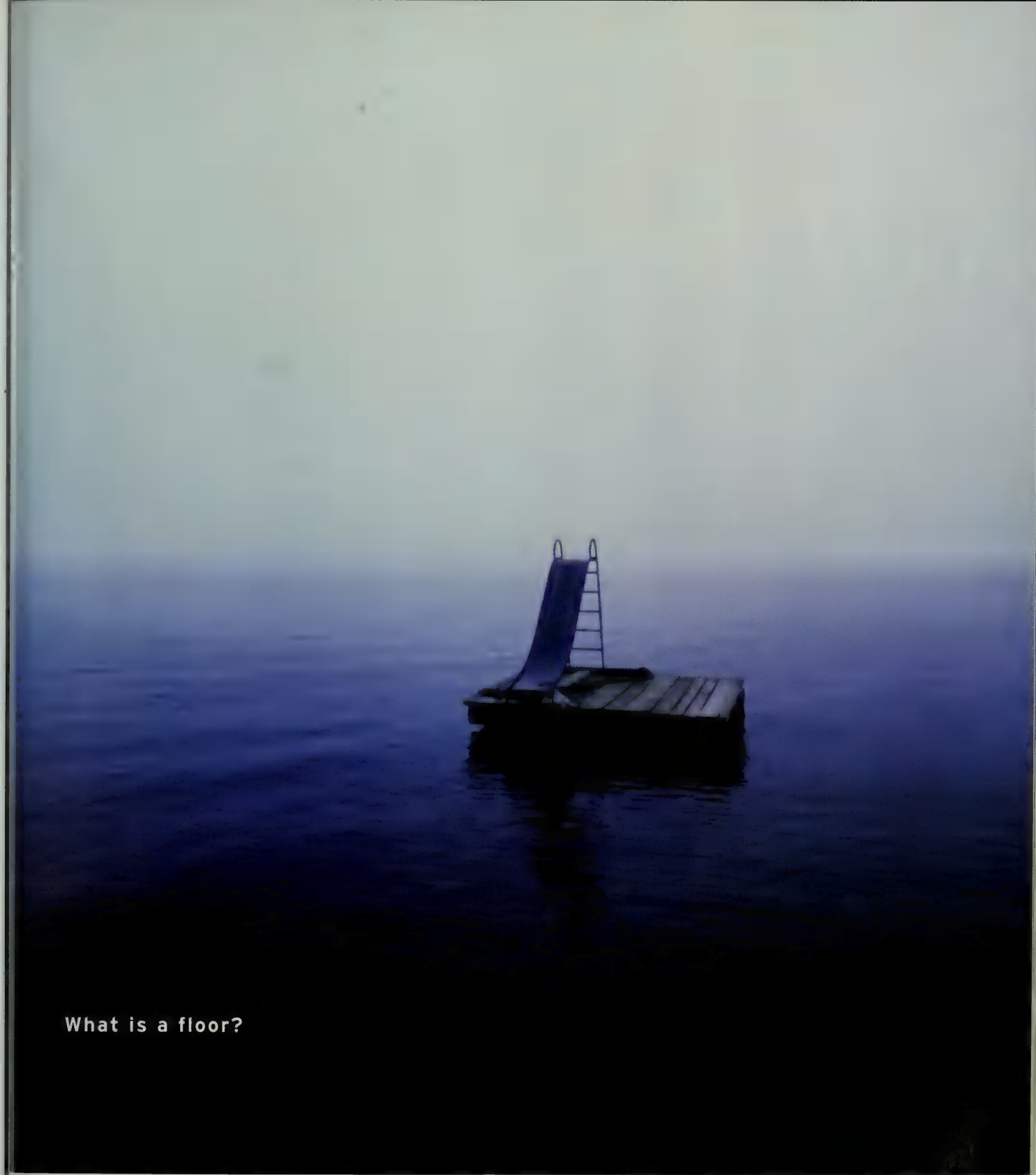
COPYRIGHT AND REPRINTING: Title ® reg. in U.S. Patent Office. Copyright © 2000 by The McGraw-Hill Companies. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, Mass. 01923. To photocopy any article herein for personal or internal reference use only for the base fee of $1.80 per copy of the article plus ten cents per page, send payment to CCC. ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, N.Y. 10121-2298; fax 212/904-4256. For reprints call 609/426-5129 or fax 609/426-7087. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because the possibility of human or mechanical error by our sources, The McGraw-Hill Companies or ARCHITECTURAL RECORD does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions therein or for the results to be obtained from the use of such information of for any damages resulting therefrom.

PRINTED IN USA

Architectural Record
McGraw-Hill Construction Information Group
A Division of The McGraw-Hill Companies

ABC MPA

THE AMERICAN INSTITUTE OF ARCHITECTS 2000 BOARD OF DIRECTORS • OFFICERS: *President:* Ronald L. Skaggs, FAIA; *First Vice President:* John D. Anderson, FAIA; *Vice Presidents:* Linda Searl, FAIA, Gordon H. Chong, FAIA, J. Richard Kremer, AIA; *Secretary:* Stephan Castellanos, FAIA; *Treasurer:* Harry Rutledge, AIA, RIBA • **REGIONAL DIRECTORS:** Roy Abernathy, Assoc. AIA, Jerry E. Abramson, Harold L. Adams, FAIA, RIBA, IIA, John Reid Benson, AIA, Bruce E. Blackmer, AIA, Derek Bradford, AIA, RIBA, ASLA, Timothy G. Cahill, AIA, Stephan Castellanos, AIA, Lugean I. Chilcote, FAIA, Donald M. Comstock, AIA, John I. Corkill Jr., AIA, Ben R. Darmer, FAIA, Richard Farson, Ph.D., Thomas G. Fernandez, AIA, Richard I. Ford Jr., AIA, John P. Franzen, AIA, James Gatsch, AIA, Holly K. Gerberding, AIA, Eugene Hopkins, FAIA, Timothy D. Kent, CAE, Edward Kodet Jr., FAIA, Lawrence R. Livergood, AIA, Kenneth Maynard, FAIA, David Messersmith, FAIA, Melissa Mileff, Barbara A. Nadel, FAIA, Robert L. Newsom III, FAIA, Thompson E. Penney, FAIA, Michael L. Pfifi, AIA, Angel C. Saqui, FAIA, Larry M. Schneider, AIA, Katherine I. Schwennsen, AIA, Wayne D. Silberschlag, AIA, Bill D. Smith, FAIA, Marvin J. Sparn, FAIA, Douglas I. Steidl, FAIA, Ward Whitwam, AIA, David L. Wooley, AIA, Steven Winkel, FAIA; *CACE Representative:* Timothy D. Kent, CAE; *AIAS Representative:* Melissa Mileff • **AIA MANAGEMENT COUNCIL:** Norman L. Koonce, FAIA, *Executive Vice President/CEO;* Jim Dinegar, *COO;* Richard J. James, *CFO;* Chuck Hamlin, *Managing Director, AIA Communications;* Brenda Henderson, *Managing Director, AIA Component Relations;* Dale R. Ellickson, FAIA, *Managing Director, AIA Contract Documents;* Lisa Blackwell, *Managing Director, AIA Government Affairs;* Laura Lide, *Managing Director, AIA Human Resources;* Kimberly Allen, *Managing Director, AIA Knowledge Center;* Kenna Wood, *Managing Director, AIA Marketing and Research;* John Gaillard, *Managing Director, AIA Meetings and Events;* Nancy Somerville, Hon. AIA, *Managing Director, AIA Membership Systems;* Michael Copp, *Managing Director, AIA Professional Practice;* Helene Combs Dreiling, FAIA, *Managing Director, AIA Stakeholder Relations;* Philip D. O'Neal, *Managing Director, AIA Technology*



www.annsacks.com 1+800+969+5217

ANN SACKS

tile stone plumbing

CIRCLE 5 ON INQUIRY CARD

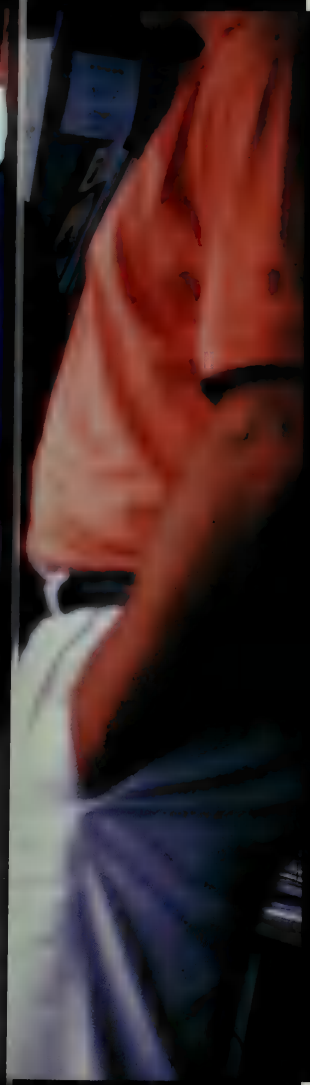
The harmonious integration of architecture, furniture and technology

pathways @ work



"We've cut our time to market 30% since we set up shop here."

John V[illegible]non
Chief Executive Officer
[illegible].com



"Our new work environment has improved our productivity because it enabled us to support our people, our processes and our culture. Thanks to Pathways®. Pathways is reconfigurable, personalizable, upgradeable – just like the software we create for our customers. So it's no wonder Pathways helped us boost our productivity – just like our software does for its users."

Can Pathways products boost your productivity? See for yourself at www.steelcase.com

Steelcase®

CIRCLE 6 ON INQUIRY CARD

No one will ever credit drywall for making a house mystical.





Design a house. Create a haven. Carefully place light and dark to entice the soul. Tell us what shape. What wood. What color. Tell u

©2000 Weather Shield Mfg., Inc.



Weather Shield
Windows & Doors

CIRCLE 7 ON INQUIRY CARD

ll create it. Because imagination can't be found on a shelf. Call 1-800-477-6808 x2343 or visit us at weathershield.com. See the light.™



You're known for taking pains, for getting the little things right – and for inspiring others to do the same. In short, you're the person we had in mind when we created ProjectTalk. It's the most comprehensive and secure online project management and collaboration tool now available – created by Meridian Project Systems, the same minds that gave you Prolog. With ProjectTalk, the entire team works together online, from concept to occupancy. And it all happens in real time. Nobody works with outdated information.



With ProjectTalk, you can distribute and track preliminary, bid and construction drawings. You can manage meeting minutes, submittals, RFI's, and post drawing revisions – instantly.

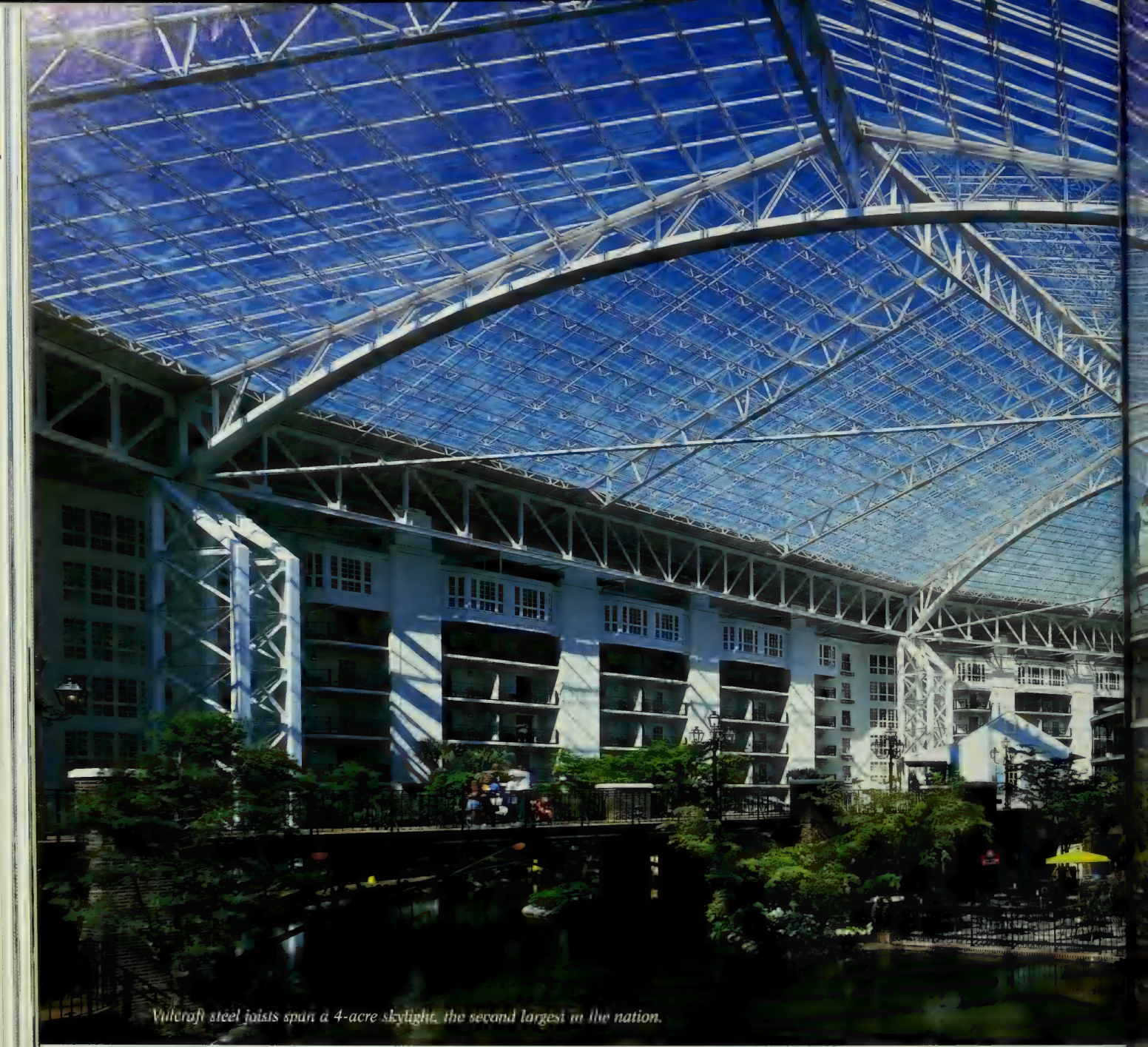
All data is housed in a Qwest Communications state-of-the-art data center, and is protected by multiple layers of security to ensure your information is safe.

Call us at 1-800-850-2660 or visit our website at ProjectTalk.com.

Visit the ProjectTalk.com booth #615 at the REC Systems 2000 trade show in Anaheim, CA.

ProjectTalk.com
where the project team
Powered By PROLOG

CIRCLE 8 ON INQUIRY CARD



Vulcraft steel joists span a 4-acre skylight, the second largest in the nation.

CHECK INTO THE OPRYLAND HOTEL AN

With a $175 million expansion, Opryland Hotel in Nashville, Tennessee claims the title of the largest combined hotel and convention center under one roof anywhere.

The centerpiece of this project is the Delta, a 4.5-acre interiorscape topped by a 4-acre glass roof weighing 650 tons and rising 150 feet overhead. It is the second largest skylight in the nation. And at the heart of this shimmering structure are Vulcraft steel joists, more than 900 of them.

When the architect's design criteria called for a light airy look, the structural engineer recommended Vulcraft sloped



Architect: Earl Swensson Associates Structural Engineer: Stanley D. Lindsey & Associates General Contractor: Hardaway Construction Co. Steel Fabricator: Wylie Steel

HECK OUT THIS SPECTACULAR SKYLIGHT.

oists. Not only did they meet the aesthetic requirements, hey offered the most economical system compared to ther alternatives studied. And Vulcraft's experienced neers along with a committed shipping department red a problem-free construction process.

As the largest and most experienced steel joist producer, Vulcraft plays an important role in many of the most innovative projects being built. For more information contact any of our six plants. And remember, the sky's the limit. www.vulcraft.com

VULCRAFT
A Division of Nucor Corporation

CIRCLE 9 ON INQUIRY CARD

Box 186, Grapeland, TX 75844, 409/687-4665 P.O. Box 59, Norfolk, NE 68702, 402/644-8500 P.O. Box 1000, St. Joe, IN 46785, 219/337-1800

Roppe: The One Source

Working with you to create environments for today, and for tomorrow.

Our Three Cove Base Lines Meet All The New Specifications

When it comes to wall base, Roppe is still the leader. We offer all 3 separate types of cove base defined in the new ASTM cove base specification F-1861:

- Type TS—Thermoset Vulcanized SBR Rubber
- Type TP—Thermoplastic Rubber
- Type TV—Thermoplastic Vinyl

New Accessories Shapes

We offer the largest selection of accessories in the industry, to provide you with the perfect finishing touch for every installation.

More Colors, More Freedom

In addition to our 25 MatchMates "all-product" colors, you'll find one of the widest color selections in the industry. And, you'll find it in every line—from our cove base, to tile, to treads, to accessories. For ever-popular "basics" to the latest warm and cool shades, you'll find colors that give you the freedom of choice you need.

New Products, More Options

New! Fiesta™ Tile & Treads

Beautiful, adaptable, and unique! Our new Fiesta™ tile and treads offers the rugged durability of rubber with a contemporary, playful look. Mix and match colors with our other products for even more fun.

9 Foot Stair Treads

For long stairs that have always been difficult to cover, a seamless tread installation is now a reality. Roppe offers rubber treads in lengths of up to 9 feet, with:

- Color selection (all the same colors as our other rubber treads!)
- Cost savings (no more cutting and piecing)
- A better finished look (no seams)

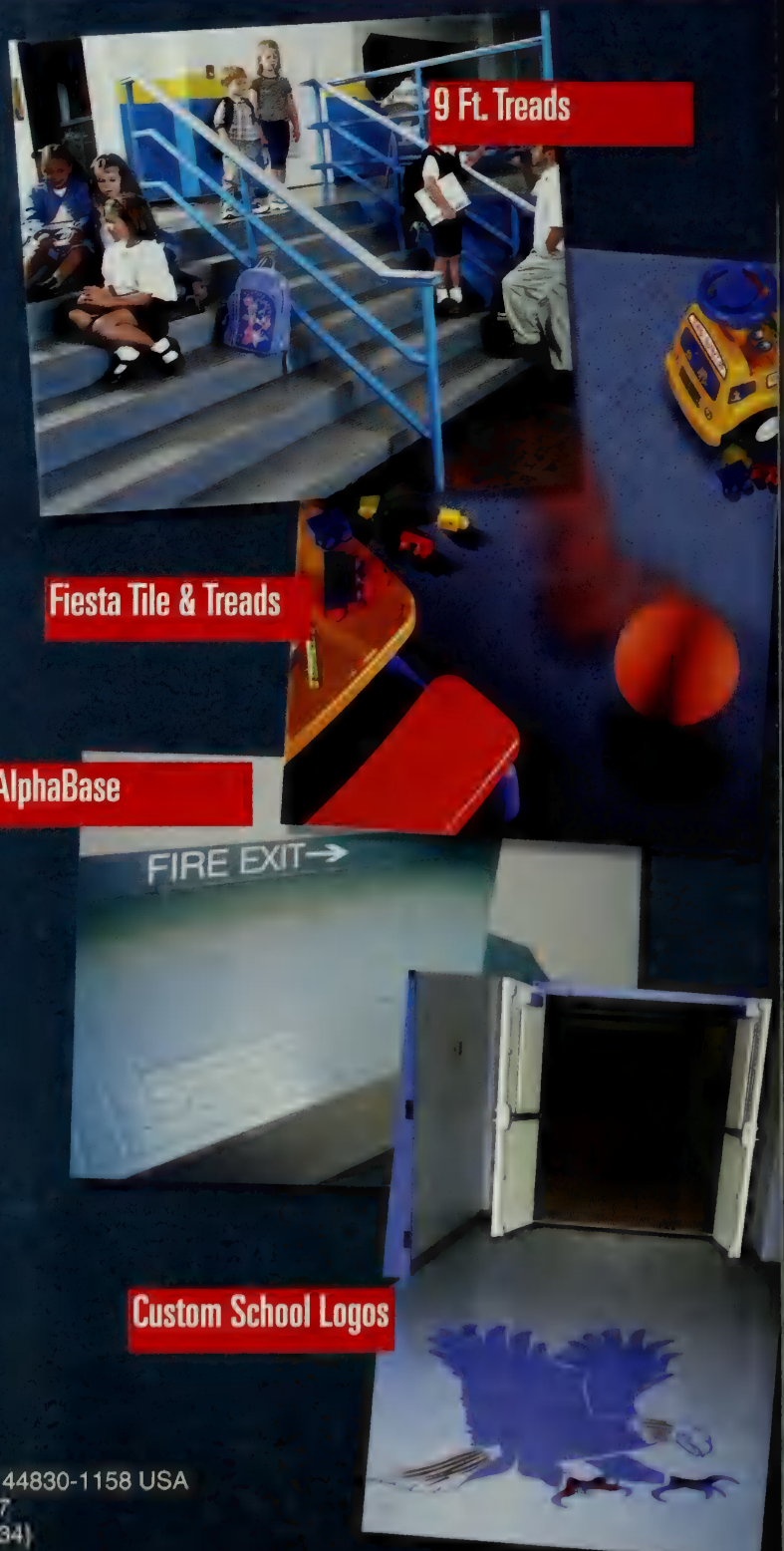
providing problem-solving and enhanced beauty for many installations.

AlphaBase

This unique product was designed with safety in mind...for schools, hospitals, dormitories, public buildings...anywhere you need to show exits and escape routes out of buildings. You also have the option to order it with any kind of signage you desire—including names and symbols—in any color you require.

Custom School Logos

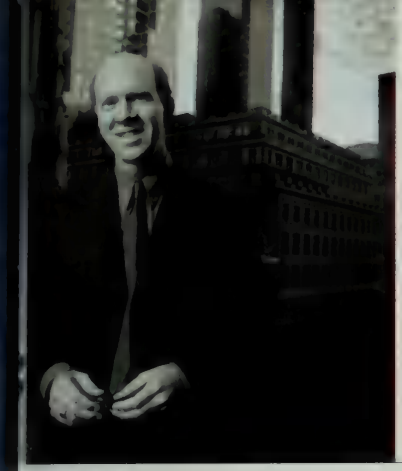
You can make your school unique by having your own special school logo right in the floor! We can provide any design, in any size, plus we can match your school colors. (Pictured: Eastwood High School, Pemberville, Ohio (*Eastwood Eagles* logo custom color match).



Roppe CORPORATION

CIRCLE 10 ON INQUIRY CARD

1602 N. Union Street ~ P.O. Box 1158 • Fostoria, OH 44830-1158 USA
419-435-8546 • FAX: 419-435-1056 • 1-800-537-8527
For Samples Call Toll-Free 1-877-SAMPLE4 (726-7534)
www.roppe.com • Email: sales@roppe.com



Show me your tattoo

Editorial

By Robert Ivy, FAIA

Beauty, by definition, is evanescent and difficult to define—dependent on motive, education, nerve endings, and geography. For proof, imagine how two persons, a Maori adult or the parent of a rebellious Chicago teenager, might react to the swirling patterns of a facial tattoo: Where one sees beauty, the other's perception is colored by fear for a daughter's clean cheeks. Shift the lens and the argument to the Asian mega-size. Whole cities are being constructed there with monumental glass office towers that may symbolize prosperity to residents, but grate at Western sensibilities. At both the intimate and the urban scales, the relationship of the parts to the whole, of the effects and the affect of objects on our experience, directly intersects with that eternally troubling question, What is the nature of beauty? When do we recognize it? Who says what it is? And who cares?

Why, in an age of ethnic, religious, and political friction, of poorly housed populations, and continual racial and gender inequities, would Architectural Record *take up this warhorse? The term "beauty" can still provoke raised eyebrows in academic circles—it hasn't been intellectually fashionable to discuss or to claim the term since Venturi and Scott Brown trumpeted the strip and made kitsch catching. But look around. A new generation of design and construction potential has been unleashed, in part by ascendant economies, emerging electronic technologies, the Web, and global commerce. According to the latest work and thought of pragmatic commercial design warriors, virtually anything goes, anywhere. If we consider the distressingly vapid qualities of individual buildings and entire urban districts cropping up globally, shouldn't aesthetics count?*

Architectural Record is calling time-out. At a moment of wide-ranging artistic freedom, when formerly agreed-upon design principles have been declared irrelevant, elitist, or out-of-sync, it is time to reflect on what matters today. The disinterested perspective that aesthetics concerns itself with, based on the qualities of the objects and the places themselves, could help distinguish between life-enhancing and harmful environments, as well as those that merely oil the machinery of daily living.

Actually, we've been talking about the nature of beauty for over two millennia. Our primary sourcebook on the topic has been Aristotle, who wrote extensively on aesthetics and human perception. (Aesthetics, like its Greek root aisthetikas, *means "sensory perception.") His writings, including* Poetics *and* Rhetoric, *addressed order and definition in art, the relationship of the parts and their placement to each other and to the entirety, and relative scale and size. That very incomplete list could itself form the basis of an aesthetic discussion. How should we analyze objects in formal terms? In the past we relied on a list of characteristics, including rhythm, proportion, repetition, symmetry—terms that presupposed mathematical patterns, an ideal Platonic order, to refer to Aristotle's predecessor. Can we discern patterns worth emulating today? Should*

"THE ORDER OF THE HEAVENS WAS SIMULTANEOUSLY MADE TO APPEAR AND DISCOVERED THROUGH THE MAKING."
—Indra Kagis McEwen, on Anaximander, the first philosopher

our criteria be based on purely materialistic phenomena such as biology? Can we find beauty, and order, in Greg Lynn's biomorphic architecture [page 78]?

A partial answer lies in who controls the debate. Magazines such as Architectural Record *have been at the nexus of the discussion, poised between the architectural makers and the larger world. It is a position that demands humility: Too definitive or assertive a definition of beauty, as Suzannah Lessard contends [page 68], can translate to power, a potentially corrupting influence. The critical viewpoint we learned in school, a skeptical, interrogatory posture, should not curdle into a soured worldview, but should encourage us to probe.*

We admit it: aesthetics plays a considerable role in this magazine's evaluation—at least initially. In considering what to publish, we scout some projects from the conceptual stage and follow them through to completion. But for the bulk of unfamiliar projects, we are often attracted to an image that precipitates conversation, evaluation, analysis, and debate in a larger group. Prior to publication, we travel and form a more thorough understanding of a project's worth, according to actual experiences in real space. But the fact remains: aesthetic judgment, based on the image, often comes first—an unavoidable reality.

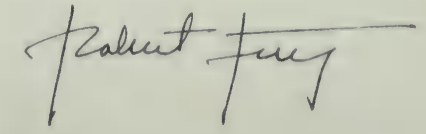
Here is the secret that's rarely discussed—unattractive, banal, or mundane work rarely makes it to the printed page. You, the reader, are part of the reason. Everyday life contains adequate examples of the mediocre; we, the entire publishing industry, rarely trumpet the ugly or the ordinary. Studies show that you simply do not pick up a magazine with an unattractive cover, for example. This response between reader and publication constitutes an attraction to the beautiful akin to the erotic that we rarely violate. An unspoken compact therefore exists between magazine publishing and its readership, brokered in our case by the architectural photographer, to discover and present the beautiful, however the term might be defined.

Do not try to pin us down, however. Our definition changes with the falling leaves. We hunger, as we think you do, for a more subtle portrayal of architecture, one tempered by history and economic imperative, by cultural shading and geographic or political necessity. We're conscious that we inhabit a world culture, not simply a Western one, not simply an American one, so are wary of the absolute answer, seeking to avoid characterizing architecture solely through oppositional language (either/or) and trying instead to present the work in a more chromatic, more nuanced manner.

Nor is our aesthetic limited to how things appear, but strives to engage the relationship of ideas (concepts, arguments) or other qualities to each other and to the whole. We're not limited to superficial appearances, to the surfaces of things. At a moment of intellectual flux, of conversations in which chaos theory, engineering, and architecture converge, technology now allows us to fill out the picture through our Web site, architecturalrecord.com, permitting virtual walk-throughs, additional drawings, sketches, interviews, and raw data that can shade and shadow our presentation into three dimensions.

Cities and architecture in the ensemble present a thornier problem. To Aristotle's way of thinking, the city could not be analyzed on aesthetic grounds: it was too big to see. Today, aerial and satellite photography allows us to zero in on the building, the block, or the precinct or to gain godlike distance. The current Critique column, for example, examines two cities at three scales, investigating how public policy affects built form in two places—New York City and Portland, Oregon.

So magazines are in the business of defining beauty, even difficult beauty, and Architectural Record *is no exception. We practice aesthetics, and you, the reader, are part of the contract. In our searches for the most relevant or the most compelling projects, you will discover what we, the editorial staff, consider beautiful. It is incumbent on us to state our reasons clearly, allowing you to pick up the threads of information or perception, weave them together, and make up your own mind. Let the debates begin.*



NOW A DELIVERY DIMENSION THAT PRECAST CAN'T OFFER



New. Formawall® Dimension Series® architectural metal panels.

Short lead times that make precast even more replaceable. When your construction schedule is tight, new CENTRIA Formawall Dimension Series Factory Foamed architectural metal panels offer another benefit: they're available right now! In fact, with Dimension Series panels, lead times for your designs are typically much shorter than for architectural precast or other competitive materials. And Dimension Series panels give you far more creative flexibility to make your designs much more interesting and colorful. Don't cast your plans in concrete, start adding a new Dimension to your design. Contact CENTRIA today for a personal presentation. **Quit stonewalling. You've settled for precast long enough.**

CENTRIA

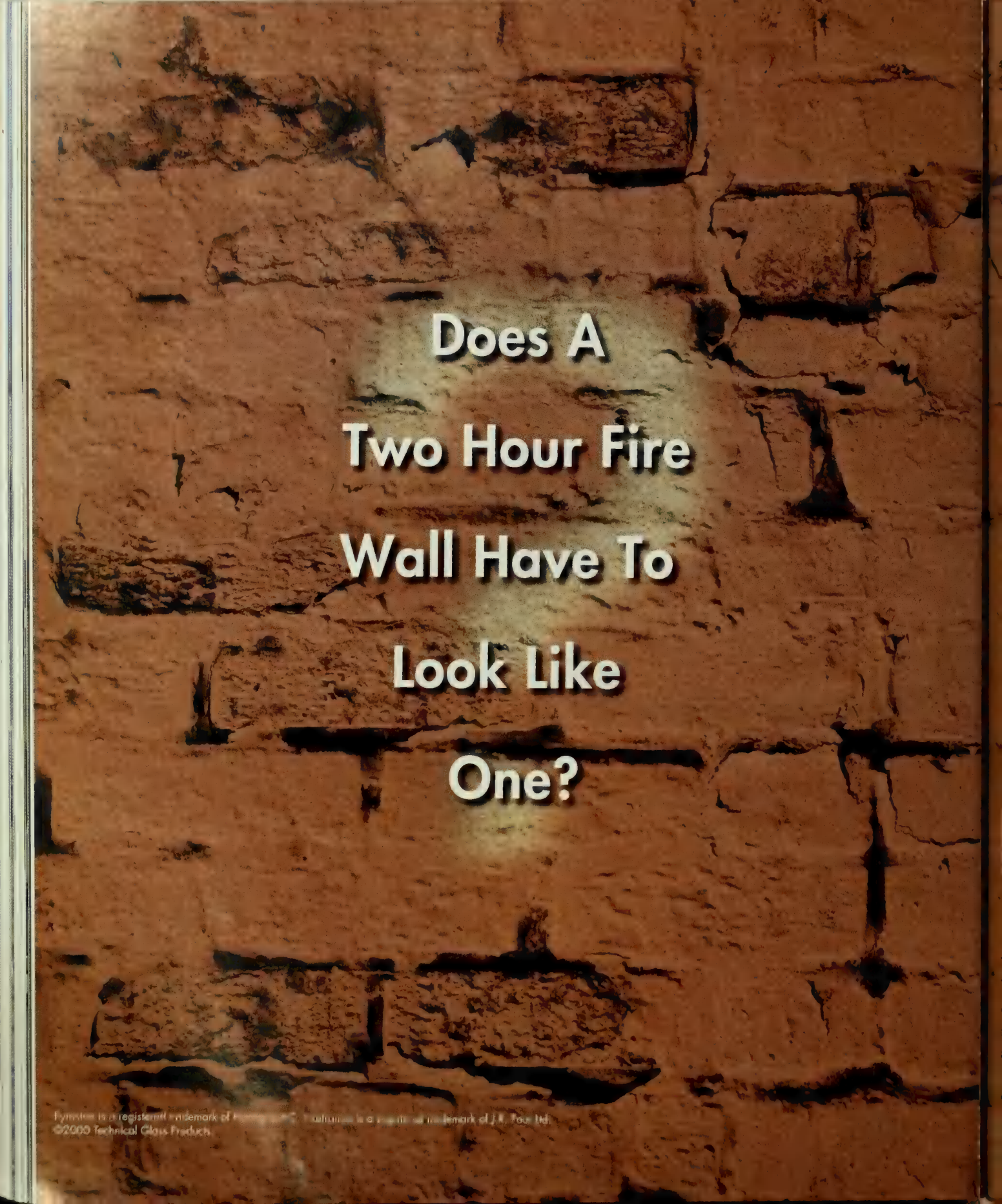
CENTRIA Architectural Systems

DIMENSION SERIES A Product For The New Millennium As selected by Architectural Record

1 . 8 0 0 . 7 5 2 . 0 5 4 9

www.centria.com

CIRCLE 13 ON INQUIRY CARD



Pyrostop is a registered trademark of [illegible]. Pyroflam is a [illegible] trademark of J.E. Pour Ltd.
©2000 Technical Glass Products



Not anymore.

And no sprinklers required.

That's right – floor-to-ceiling glass that is actually rated as a wall. Technical Glass Products' unique system combines Pilkington Pyrostop® glass with Fireframes® by Forster to offer you transparent wall units and full-vision doors. Listed by U.L., the system carries fire ratings up to 2 hours and provides a barrier to flames, smoke and heat.

Call today to find out more about this revolutionary system.

1-888-397-FIRE **www.fireglass.com**

CLASSIFIED c UL us

TGP Technical Glass Products

ONE SOURCE. MANY SOLUTIONS

CIRCLE 11 ON INQUIRY CARD



Washington Hall, center stage for theatre and cultural events at Notre Dam
Built in 1881, this modern Gothic structure was named by Father Sorin
himself, Notre Dame's founder, in honor of his great hero, George Washingto

You've got to be good to go into Notre Dame and leave with a victory.

When the University of Notre Dame decided to replace the windows in two of the more historic buildings on its storied campus, all the major manufacturers wanted the job. But as they learned more about the size and scope of the project, the list began to dwindle. Since both buildings are on the National Register of Historic Places, Notre Dame wanted windows with wood interiors that matched the appearance and profile of the originals. To minimize maintenance, another demand was aluminum clad exteriors. Marvin Windows and Doors emerged victorious. And designed and built 310 windows for the project, not one of which was a standard size. Not only that, but the casings were factory applied and a custom color for the exterior cladding was developed to replicate the 100 year-old originals. If you have a challenging commercial project, contact the company that has a reputation for winning the tough ones.



The wood interiors of Marvin's windows are virtually identical to those installed a century ago. For the exterior aluminum cladding, an appropriately-named custom color was created: Irish Bronze.



MARVIN Windows and Doors

Made for you.

For a free catalog, call 1-800-236-9690. In Canada, 1-800-263-6161. www.marvin.com

1200011A

CIRCLE 12 ON INQUIRY CARD

Letters

DEPARTMENTS

Three on the inside of interiors

The higher standard of practice you write about in your September editorial ["The keys to the kingdom," page 17] is eminently desirable, but the focus of licensing is much more on the "lowest common denominator." When architectural registration was debated in California in the late 1970s, there was talk among the profession of instituting two levels of licensing, to distinguish the "real professionals" from those doing "garage additions." California architects had their own version of the decorator problem, too, with registered building designers—a holdover category given title protection but no ability to register new members. Allowing them to do so, ironically, might have given architects the two tiers some of them were seeking.

To the extent that architecture is "exterior decoration" and architects are engaged purely in form giving, that leaves interior designers as the main advocates of the user in the building design process. That impulse led them in the 1980s to champion the indoor air quality issue, which was just as much an antecedent of sustainable design as energy conservation was for architects. Significantly, the interior design professional's focus was on quality of life as users experienced it, not just on building performance.

Many architects recognize and value interior designers' greater understanding of how settings support people (and organizations) in their various activities. More consistently than architects, interior designers work in four dimensions, anticipating how settings will evolve and looking at the other components of the building to see if they help or hinder this.

Interior design education may lack the supposed consistency and breadth of its architecture counterpart, but that will change as interior design emerges as a distinct profession. The actual proficiency of interior design practitioners is a better guide to evaluating their current claims to that status. On that basis, those claims seem quite valid.

—John Parman
Berkeley, Calif.

I agree with your September editorial that the education of interior designers must become more rigorous regardless of whether or not they achieve licensure. But may I remind readers that, with a few exceptions, architects generally look down their noses at anyone who is not an architect. I learned this as a "civilian" member of the board of the Architectural League of New York years ago. Interior designers are not the only professionals singled out by architects for lack of respect.

As far as the stakes involved, the figure you report—interiors industry fees in excess of $1 billion—seems very low. The industrial design field, with approximately 6,200 designers in consulting offices alone (not counting those on the corporate side), is good for $1.6 billion in fees, according to research conducted by the Association of Professional Design Firms and reported to the



IDSA Conference (September 2000 in New Orleans) by Lorin Spak, the former APDF president.
—RitaSue Siegel, IDSA
RitaSue Siegel Resources
Via E-mail

For the record, the vast majority of interior designers practice in the residential arena, working directly with consumers who have little or no expertise dealing with these professionals, on projects that involve not only thousands of dollars, but sometimes hundreds of thousands of dollars with no regulatory or government oversight. Every trade and profession in the construction industry is licensed, with some very minor exceptions for the simple reason of consumer protection. We at CCIDC, the Certification Board in California for Interior Designers, have logged dozens of consumer complaints over the last several years, mostly against unqualified, uneducated, inexperienced individuals posing as interior designers. AB 1096 will help rectify this situation by giving consumers a choice in knowing that if they hire a "registered" interior designer, that person has been educated, tested, and is experienced, as opposed to one who is not registered.
—Douglas R. Stead, CID
CCIDC executive VP
Via E-mail

Taking issue with an issue

I would like to take this opportunity to point out what I believe are some serious factual inaccuracies in the sidebar discussing the recladding of the Amoco building in Chicago [NOVEMBER 2000, page 168]. First, the article implies that the recladding of the building was necessary due not only to the thinness of the marble cladding material, but also due to the lack of stiffness in the primary steel frame.

In my opinion, these statements placing partial blame for the recladding of the Amoco building on the primary structural steel frame are patently untrue and, I believe, entirely inconsistent with the conclusions reached by Weiss Janney Elsner, who investigated the cause of the cladding failure. The design of the primary structural frame has never been mentioned as the cause.

Second, the article implies, through the inclusion of a steel-quantities-versus-building-height chart, that by reducing the amount of structural steel, the structural engineers have unwittingly reduced the building stiffness contributing to the cladding failure. This is absolutely untrue, for the Amoco building in particular, and for modern tall buildings in general.
—Robert C. Sinn, P.E., S.E.
Associate Partner
Skidmore, Owings & Merrill LLP

Mr. Sinn is correct. Since the 1960s, developments in structural steel design (including improved computer technology and modeling, structural system organization, and wind tunnel testing) have allowed engineers to design steel structures more efficiently (i.e., using less material) without compromising the building's structural performance or safety. We apologize for the errors.
—The Editors

Corrections

In the September issue ["Designing with Structural Fabrics," page 155] the correct caption for the photos of the Burj Al Arab Hotel on page 160 should have been: "The coated fabric screen of the Burj Al Arab Hotel in Dubai is made using Dyneon PTFE and is divided into 12 parts." The name of the structural concrete and concrete slab contractor at the Duggal Headquarters [SEPTEMBER 2000, page 122] is Harriett Lever Construction Corp. Jennifer Krogh should have been credited for taking the photograph of the Siris/Coombs Architects' penthouse on page 84 of APRIL 2000. Arthur Jones, AIA, should have been credited as principal-in-charge of the PSFS project in October, page 140. Also in October [News, page 50] British architect Terry Farrell's name was misspelled, as was Forest City Ratner Companies [page 44].



MechoShades® and ElectroShades® meet the need for a healthier more productive space by providing...

- Solar protection & view
- Assured alignment
- Glare & brightness control
- Energy efficiency
- Controlled daylight
- 10 Year Fit-For-Use Warranty
- Minimal maintenance

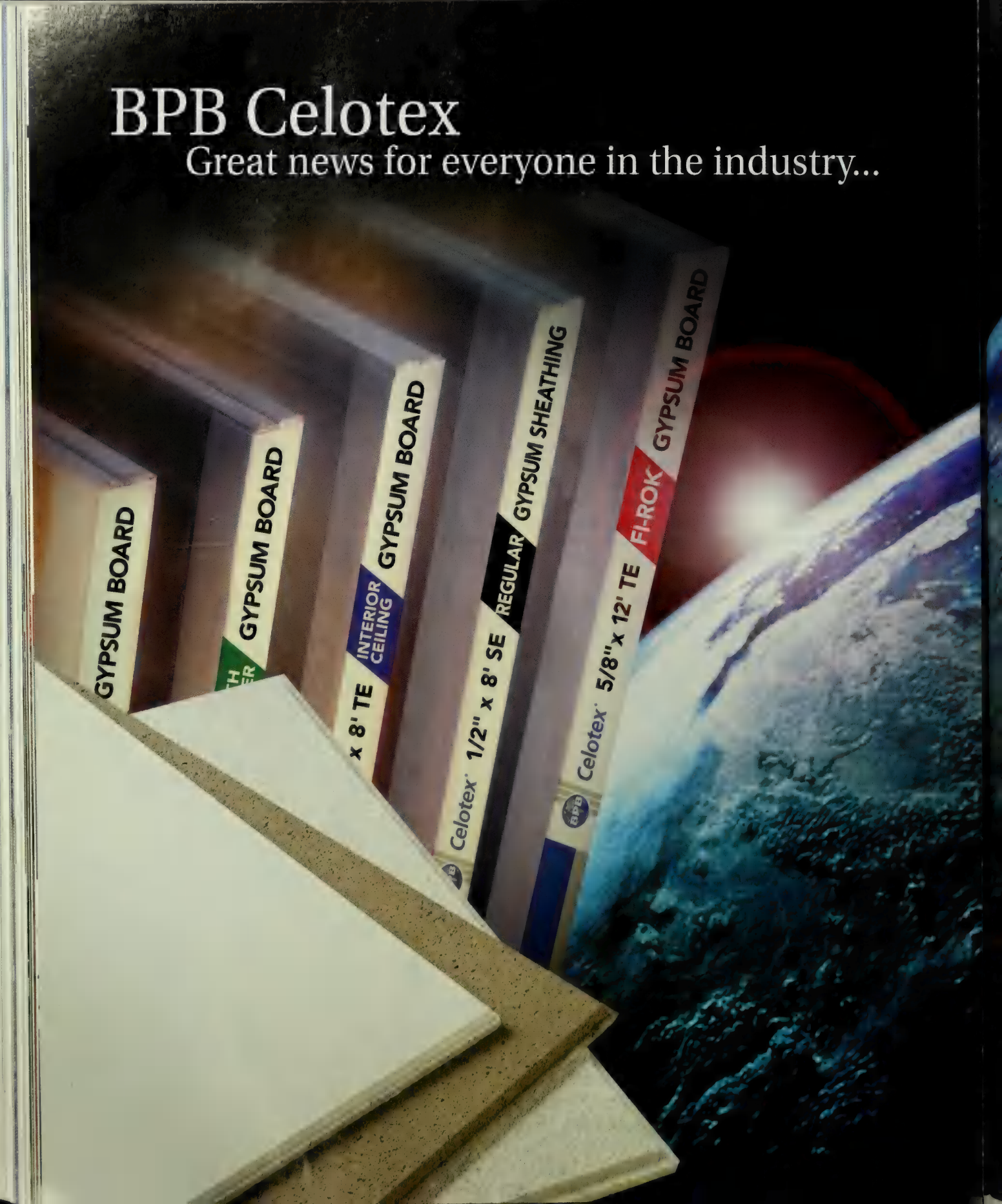
Manual MechoShades and motorized ElectroShades are available for standard windows, greenhouses, atriums and skylights—all integrated into a uniform cohesive environment.

For more information call
1 877-774-2572

MechoShade®
MechoShade Systems, Inc.
42-03 35th Street, Long Island City, NY 11101
http://www.mechoshade.com
CIRCLE 14 ON INQUIRY CARD

BPB Celotex

Great news for everyone in the industry...





...except our competitors.

Announcing the ultimate partnership of high tech and high touch: BPB Celotex, a powerful new force in the interior finishes industry.

BPB Celotex For Walls
The first-rate Celotex gypsum board you've used for years is better than ever. Now, because of our access to 90 plants in 45 countries around the world, we benchmark the best manufacturing practices to continually improve our quality and service. For you, that means a more consistent and wider product line, and assured supply.



BPB Celotex For Ceilings
Whether your design requirements are aesthetic beauty, acoustical performance or durability, the reputation of Celotex and Capaul are well-known for their unmatched and distinctive ceiling solutions.

BPB Celotex For Answers
You'll find the same friendly voice on the phone to take your orders. And, for technical assistance, installation advice, product inquiries and more, our Customer Response Center stands ready to help.

From product to service, we make it easy to work with us. Now, how can we make your life easier?

BPB Celotex®

For Walls. For Ceilings. For Answers.
1-800-CELOTEX
www.bpb-celotex.com

CIRCLE 15 ON INQUIRY CARD



Is your CAD system ready for the wrecking ball? Instead try Revit.



www.revit.com
1-877-47REVIT

revit
revolutionizing building design



Products:
EFCO Series 890 Casement
Fixed, Series 3500 Horizont
Sliding, Series 3900 Fixed
Thermal Windows

Building:
The Strathmore,
New York, New York

Architect:
Costas Kondylis

Erector:
K & M Architectural
Window Products

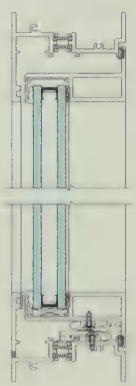
EFFICIENT

LOOK TO EFCO® FOR EFFICIENT WAYS TO SAVE ON ENERGY COSTS.

Now you can upgrade your windows with the money you'll save in utility costs. Look to EFCO for the expertise you'll need to implement a complete glazing and fenestration energy program that leverages your utilities savings.

As a major Division 8 manufacturer, EFCO has energy efficient products, as well as years of experience in performance testing and analysis for U-values, shading coefficients, and daylighting.

Whether new construction or retrofit, EFCO thermal windows will help you achieve the most efficient building envelope possible. Our thermal windows come in two types of barriers: fill-and-debridge or Insulbar® two-piece construction, which allows a different finish on the interior and exterior. Insulated glass units are standard glazing. For extra energy savings, choose triple glazing or Heat Mirror™.





Get EFCO involved with your energy consultant early in the project for your most effective energy plan. Or let EFCO help you find the consultant that's right for you. Contact your EFCO representative, call EFCO direct at 1-800-221-4169, or visit our Web site at www.efcocorp.com.

CIRCLE 16 ON INQUIRY CARD

EFCO®

WINDOWS
CURTAIN WALLS
ENTRANCES
STOREFRONTS

Insulbar® is a registered trademark of Ensigner Inc.

Heat Mirror™ is a trademark of Southwall Technologies.

©1998 EFCO Corporation

Record News

Highlights London skyline p.36
Brooklyn's front stoop p.40
A new Hollywood Bowl p.42
Major downtown Chicago development p.46

Renzo Piano takes Manhattan, wins NY Times

Renzo Piano's first New York project will be no small feat. Piano, in association with the New York firm Fox & Fowle Architects, was named on October 13 as the winner of an architectural competition to design a *New York Times* headquarters tower in midtown Manhattan.



Piano

Piano won the four-team competition over Foster & Partners, Frank O. Gehry & Associates with Skidmore, Owings & Merrill (SOM), and Cesar Pelli & Associates. The team of Frank O. Gehry and SOM withdrew from the competition in the final days before the announcement was made. Gehry told the *New York Times*, "I would just say [the team's] process was incompatible [with the New York Times Company]."

The tower will be built on Eighth Avenue between 40th and 41st Streets, across from the Port Authority Bus Terminal. The New York Times Company, with its development partner, Forest City Ratner Companies, plans 1.3 million square feet of space in a 650-foot-tall tower on a 200-by-400-foot site. The *Times* would occupy at least half of the 45-story building, including most of the base, and the remainder would be leased for commercial and retail use.

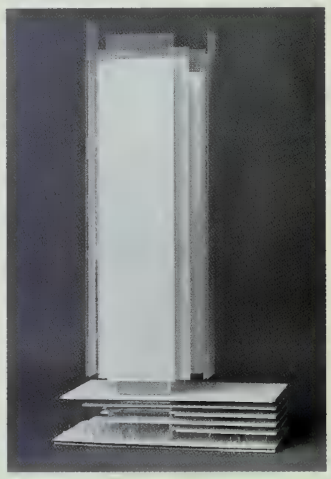
Piano's design has a transparent glass tower on a five-story base in which a public atrium would lead to a theater, a *New York Times* museum, and retail. A screen of thin white ceramic bars at about one or two feet from the exterior glass would shade about half of the facade. The double curtain wall would increase energy efficiency.

Piano told the *New York Times*, "This building is about defying gravity. In some ways, it is like information. Information is immaterial. I love the idea that the spirit of a newspaper like the *New York Times* is expressed semantically."

Fox & Fowle has acquired expertise in environmentally conscious large buildings. The firm recently completed the Condé Nast headquarters tower at Four Times Square [MARCH 2000, page 90], and construction continues on the Reuters building at Three Times Square. The Condé Nast and Reuters buildings are one block from the Times tower location.

The site, which is now divided into a number of properties, would have to be condemned and acquired by the state. It is part of the state's Times Square redevelopment project and the Times Square Business Improvement District. Contingent upon approval by the Times Company's board of directors, construction is expected to begin late in 2001 or early 2002, with completion in 2005.

Michael Golden, vice chair and senior vice president of the New York Times Company, says, "We are extraordinarily pleased to have selected Renzo Piano and Fox & Fowle to create a design that will honor our heritage and look to our future. We want our building to be a dynamic presence that enhances the beauty of New York City for residents and visitors alike."





Piano's proposed tower (top) for the *New York Times* would be located on Eighth Avenue at 41st Street (above).

The *Times* has been at its current headquarters at 43rd and Broadway, a few blocks from the new site, since 1913.

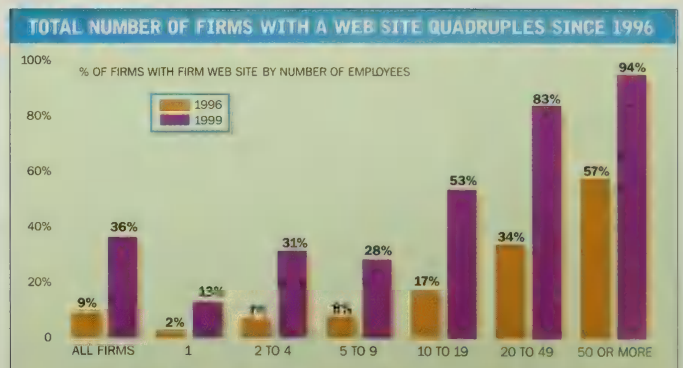
John E. Czarnecki, Assoc. AIA

Arthur Andersen tower for Times Square

Plans for one of the last of the new Times Square skyscrapers has passed a key hurdle. Arthur Andersen signed a lease October 13 with Boston Properties that would allow the developer to build a 47-story, $600 million skyscraper on the block bounded by Seventh Avenue, Broadway, 41st and 42nd Streets in midtown Manhattan. Arthur Andersen, the world's largest accounting firm, would occupy at least 500,000 of the 1.2 million square feet in the building. The tower will be designed by David M. Childs, FAIA, of Skidmore, Owings & Merrill.

Boston Properties must obtain control of the site from Prudential Insurance Company, and Arthur Andersen is in negotiations with the city of New York for approximately $10 million in tax breaks. Construction is expected to begin in early 2001.

JEC



ACCORDING TO THE AIA Firm Survey 2000–2002, the number of architecture firms with their own Web sites quadrupled from 1996 to 1999, when 36 percent of all firms had a site.

OFF THE RECORD

Juan Navarro Baldeweg has won a competition to design the Museum of Human Evolution in Burgos, Spain. Steven Holl, Jean Nouvel, Arata Isozaki, and Cruz and Ortiz were competing.

Pei Cobb Freed & Partners' Center for Government and International Studies at Harvard University received approval in September from the Mid-Cambridge Neighborhood Conservation District Commission after a substantial redesign. Olin Partnership is designing the building's surrounding landscape.

Janice Cervelli Schach, FASLA, is the new dean of Clemson University's College of Architecture, Arts and Humanities. She replaces James F. Barker, FAIA, who has been president of the university since fall 1999.

Fox & Fowle Architects has brought fellow New York firm Jambhekar Strauss into the fold. Sudhir Jambhekar and Mark Strauss, who started their firm in 1993 after leaving Kohn Pedersen Fox, are now principals at Fox & Fowle.

HNTB Corp. acquired the 160-person planning and urban design firm LDR International of Columbia, Md. HNTB now has more than 2,600 employees, and one less competitor.

The Children's Museum of Los Angeles has announced a shortlist of architects for two new museum facilities—one in downtown Los Angeles and one in the San Fernando Valley. The list includes Angelil/Graham/Pfenninger/Scholl; Chu + Gooding Architects; Hodgetts + Fung Design Associates; Jones Partners: Architecture; Morphosis; Eric Owen Moss Architects; and Randall Stout Architects. Winning architects will be named by December.

The Southern California Institute of Architecture (SCI-Arc) moved in September to East Third Street at Santa Fe in downtown Los Angeles.

Plan presented to reopen Penn Ave.

An 1802 sketch by Thomas Jefferson was an inspiration for what may be the 21st-century plan for Pennsylvania Avenue.

Washington D.C. mayor Anthony Williams, with Senator Daniel Patrick Moynihan (D-NY) and Washington's Congressional delegate, Eleanor Holmes Norton, unveiled a plan September 25 to reopen Pennsylvania Avenue in front of the White House.

Gary Haney, AIA, of Skidmore, Owings & Merrill (SOM), developed the design concept, which calls for limited-height pedestrian bridges at either end of the block in front of the White House, allowing automobile traffic to pass under the bridges but keeping out trucks to limit bomb risk. The Jefferson sketch showing a northward curve of the street (dubbed the "Jefferson Bow") inspired SOM to create a similar curve that offers both a landscaped space in front of the White House gates and an additional security buffer. The avenue would be narrowed to four lanes from eight.

"We tried to keep on a level above design for the moment; to keep it conceptual," Haney says, noting that added design controversy would obscure the larger issue of an open avenue.

President Clinton authorized the street closing in 1995 after the Oklahoma City bombing. The closing cut off a major east-west thoroughfare through downtown Washington, causing lasting resentment between city stakeholders and the Administration. According to the Parsons Transportation Group, the avenue used to carry 29,000 vehicles daily. The closed street "is strangling our transportation and our economy," says Terence Golden, chair of the Federal City Council, the bipartisan nonprofit group that sponsored the proposal.

Proponents of the reopening hope Clinton will authorize the redesign in the waning days of his presidency, or that the new Administration will embrace the opportunity to make a dramatic initial gesture of democratic openness. The Republican Party, in its 2000 convention platform, calls for the reopening of the avenue if George W. Bush is elected president. The Democrats did not call for the reopening, in part because Norton, a Democrat, is working on the plan.

"The proposal mitigates the risk to the President, his family, and the White House staff, while recognizing that fundamental American values, such as openness and accessibility, must not be sacrificed for the sake of security," says former Senator Bob Dole, president of the Federal City Council.

The Secret Service says reopening would "wave a red flag" to encourage terrorists and that the closing is necessary to protect the White House from a truck bomb.

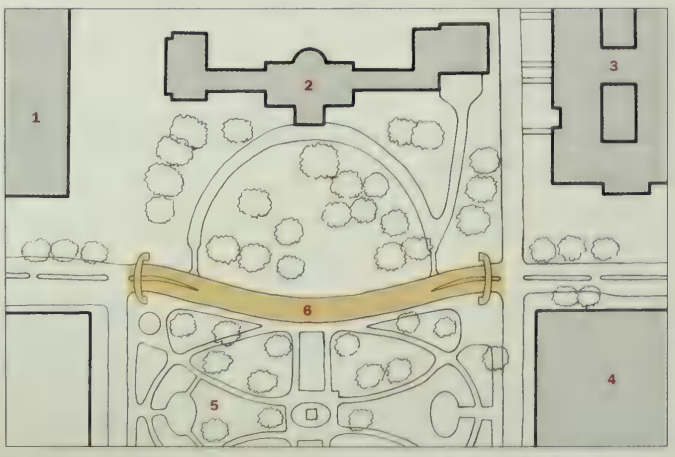
"We've shared the proposal with the White House Chief of Staff, the Treasury Secretary (who oversees the Secret Service), and a number of other people," says Federal City Council spokesperson David Perry. "Either the President will approve it, or he won't."

SOM and Parsons Transportation Group provided pro bono design and traffic analysis services for the proposal, which was based on a commissioned Rand Corporation security study.

Karen Haas Martin



Pennsylvania Avenue in front of the White House is closed to through traffic.



1. *Treasury Building*
2. *White House*
3. *Old Executive Office Building*
4. *New Executive Office Building*
5. *Lafayette Park*
6. *Pennsylvania Avenue*

The proposal for Pennsylvania Avenue includes a curved road with pedestrian bridges at either end.

Anything less than **BEGA**, is.

www.bega-us.com

Direct/Indirect Poletop for pedestrian scale applications.
Available in fluorescent and HID light sources



CIRCLE NO. 77

OFF THE RECORD

Skidmore, Owings & Merrill (SOM) has designed a new headquarters tower for The McGraw-Hill Companies (publisher of RECORD) at London's Canary Wharf. The half-million-square-foot building will be complete by 2004.

Rem Koolhaas and Hiller Scofidio are designing a cultural district around the Brooklyn Academy of Music. It may include theaters, a visual and performing arts library, new media center, charter school, mixed-use arts complex, retail, loft housing, and a hotel.

Architects are safer drivers? Farmers Insurance Group of Companies believes so, and it is offering architects a 10 percent discount on car insurance. "Our research indicates that architects are generally safer drivers and their behavior should be rewarded with better rates," says Jerry Carnahan, an executive with Farmers. Thankfully, Farmers' researchers were never in a car with RECORD editors.

Nine months after Peter Marino, Jeff Daly, Marion Weiss, and Peter Pennoyer were named the winner of an architectural competition for the Palm Beach Opera in Florida, he was replaced with the runner-up team of Charles Gwathmey, FAIA, and Pei Partnership for the design of the $56 million hall.

Plans for what would be the world's tallest building, a 112-story skyscraper in Chicago, died in August when financing fell through. The Chicago Plan Commission had approved the SOM design for the European American Realty building proposed for Madison at Dearborn Streets.

Bevier Blinder Belle, Frank Pace, Jr. spotted antique lighting fixtures from New York's Grand Central Terminal being sold on eBay. He alerted authorities, who found the culprit—a foreman on the terminal's restoration project—and charged him with criminal possession of stolen property when a number of fixtures were found at his home.

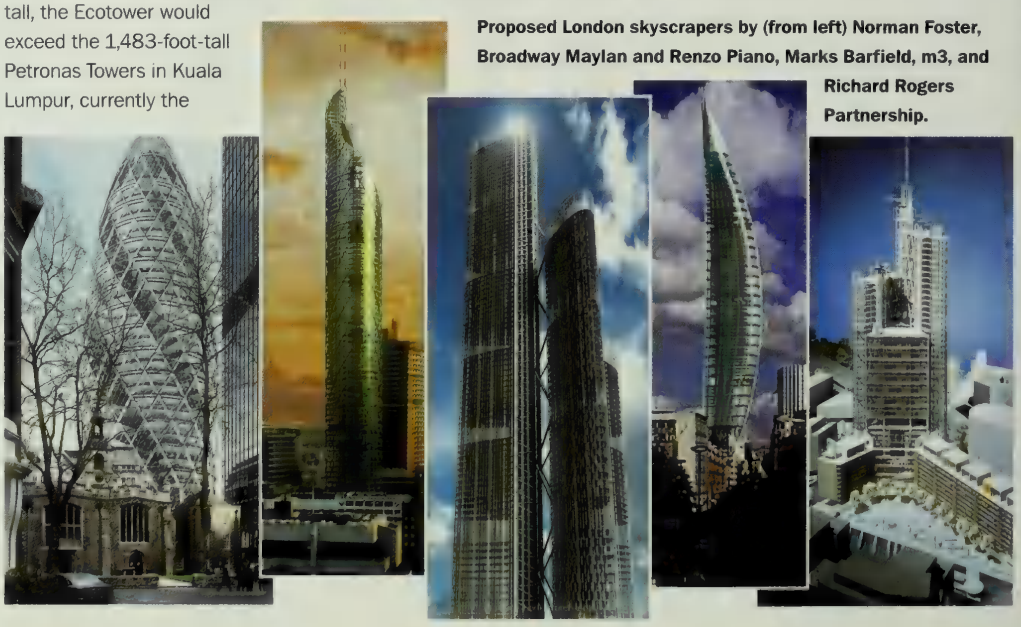
For London: Gehrkin, world's tallest tower

London's skyline is in for a drastic change, with about 10 new high-rises planned, including what might be the world's tallest building.

A five-year-old practice with a number of Norman Foster's protégés, m3 architects has designed what could be the world's tallest building. Called Citygate Ecotower, the energy-efficient skyscraper will be submitted for planning review in early 2001 and could be built by 2008. The project will have shops, a hotel, and penthouses. At 1,509 feet tall, the Ecotower would exceed the 1,483-foot-tall Petronas Towers in Kuala Lumpur, currently the world's tallest. Broadway Maylan and Renzo Piano have collaborated on a nearly 1,200-foot-tall office tower at London Bridge Station for the Sellar Property Group. The 87-story London Bridge Tower is pending approval, but could be complete in 2005.

Marks Barfield, the architects of the city's new landmark, the London Eye ferris wheel, has designed a skyscraper called Skyhouse, although it does not have a client or a site. Intended for a mix of incomes, Skyhouse is a 72-story building with shops, health clubs, nurseries, restaurants, gardens, and apartments, including low-rent flats and live-work units.

Many of the proposed towers are little over 40 stories—small by American standards but a dramatic change to the low-slung London skyline. A 45-story mixed-use tower by the Richard Rogers Partnership is awaiting planning approval for a site near Paddington Station. Norman Foster and Partners has designed a 40-story oval office building, nicknamed the Gherkin, for the Swiss Re insurance company. The Gherkin, to be located in London's Financial District, has recently received planning approval, but that is about to be challenged by a lawsuit from the British conservation group SAVE. The group is opposed to the Swiss Re tower because a protected building, the Baltic Exchange, would be demolished. *Laura Iloniemi*



Proposed London skyscrapers by (from left) Norman Foster, Broadway Maylan and Renzo Piano, Marks Barfield, m3, and Richard Rogers Partnership.

Calatrava pedestrian bridge to grace Israeli highway

A graceful glass-and-steel pedestrian bridge in Israel by Santiago Calatrava will be his first in that country. The Y-shaped structure will span the main street of Petah Tikva, a city of 160,000 people northeast of Tel Aviv. Construction on the $2 million bridge began in October and is expected to be complete in summer 2001.

The 360-foot-long bridge is suspended by steel cables from a 115-foot-tall pylon inclined at 38 degrees. At 88 feet above ground, the pylon's bend makes its uppermost part almost perpendicular to the ground. A combination of ramps, steps, and elevators will connect a hospital, mall, and business center and will allow access to buses and a planned light-rail line.

A director of the investment company Ovnat Ltd.—which is collaborating with the Petah Tikva municipality on the project—commissioned Calatrava to design the bridge after seeing models of the Zurich-based Spanish architect's work, exhibited in Israel in 1997. Moore Architects Ltd. of Israel is the local firm on the project. ***Esther Hecht***



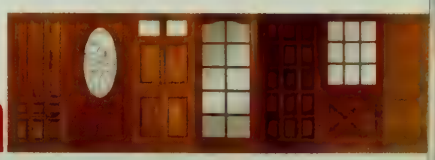


From A to Z.

No matter what wood door design you're looking for, Morgan has it. Hundreds of elegant solutions in Red Oak and Ponderosa, Radiata and Knotty Pine. We offer ten times more exterior designs, three times more interior designs than many other manufacturers. Need quick product delivery? We'll handle it. And Morgan's century-old reputation for quality assures your reputation will stand the test of time. Call now for our latest catalog: 1-800-877-9482 ext. M2. You just don't have to turn anywhere else.



Morgan



ELD-WEN, inc. All rights reserved. IELD-WEN is a registered trademark of IELD-WEN, inc., Klamath Falls, OR

Part of the IELD-WEN® *family*

CIRCLE 18 ON INQUIRY CARD

Competitions and master plan yield architecturally rich Cambridge development

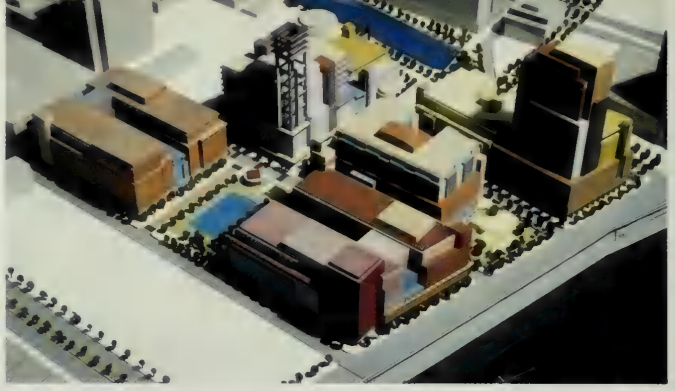
Among the highlights of a 10-acre, $400 million mixed-use development about to take shape in Cambridge, Mass., are the first U.S. buildings by Behnisch Behnisch and Partners and Toronto's Architects Alliance, and the first major East Coast project by Californian Steven Ehrlich.

The development company Lyme Properties took a conscientious approach in selecting a different architect for each of the seven proposed buildings on its property near the Longfellow Bridge over the Charles River, just north of MIT. Lyme is developing an urban neighborhood, with biotech laboratories, a hotel, cinema, residences, and retail. Through architectural competitions, Lyme selected architects for each building and a landscape architect, Michael Van Valkenburgh Associates, for the whole site.

After acquiring the former industrial site in August 1998, Lyme proceeded to clean up the existing brownfield condition and began developing a mix of uses to complement high-tech research facilities. Dan Winny, director of planning and design for Lyme Properties, says one of the development goals was to "create an active urbanism driven by the high-tech-research workplace, rather than a sterile office park. We want a diverse and active environment supportive of creative work and of those who engage in it."

Lyme hired the Toronto-based urban design and planning firm Urban Strategies to create a master plan and manage the architectural competitions. Ken Greenberg, a partner at Urban Strategies, led the master-planning effort. He says, "There's a real opportunity to create a new and unique place with a compact, urban public realm."

The Urban Strategies plan includes a regular grid of streets connecting to the existing city. Two civic squares are proposed—one adjacent to a canal leading to the Charles River, and the other adjacent to Cambridge neighborhoods.



The master plan by Urban Strategies set the framework for development.

Architects were chosen in invited competitions held from August 1999 to September 2000.

Behnisch Behnisch and Partners won a competition for its first American project—an office headquarters for a biotechnology company. Designed to be energy efficient with innovative environmental technology and indoor vegetation, this 285,000-square-foot building may be a first of its kind in this country. Based in Stuttgart, Behnisch Behnisch and Partners opened an office in Los Angeles prior to this project.

Architects Alliance was chosen for a six-story building with ground-level retail, second-floor offices, and eight residential units of 2,000 to 4,000 square feet each.

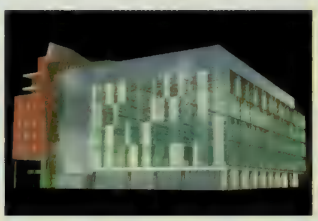
Boston's CBT/Childs Bertman Tseckares was selected for a condominium and hotel tower. Atlanta's Smallwood, Reynolds, Stewart, Stewart & Associates is collaborating with CBT on the hotel design.

Anshen + Allen Architects and Steven Ehrlich Architects won the latest Lyme competition this fall to each design one of two 250,000-square-foot biotechnology lab buildings with ground-floor retail. Both lab facilities will be complete in 2002. All other buildings are planned for opening by 2003.

Britain's MacCormac Jamieson Prichard also won a competition for a building that may include a cinema, residential units, and retail. That building's complex program has not been set. *JEC*

Competition-winning designs for the Lyme development include (clockwise from left) landscape by Michael Van Valkenburgh Associates, as well as buildings by Steven Ehrlich Architects, Anshen + Allen Architects, Architects Alliance, Behnisch Behnisch and Partners, and CBT/Childs Bertman Tseckares.

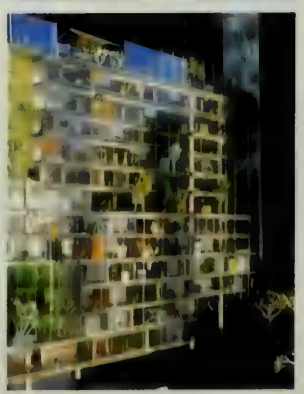













wallboard + mouse = nationalgypsum.com
Making expert decisions has never been simpler. Just log on to nationalgypsum.com for the most comprehensive gypsum products information on the web. Designed for ease of use, it's the only formula you need to make expert decisions, and just what you expect from the gypsum industry's service leader.
National Gypsum COMPANY
www.nationalgypsum.com
1.800.NATIONAL
CIRCLE 19 ON INQUIRY CARD

Sun may set on Britain's Millennium Dome while politicians play the blame game



As the millennium year draws to a close, so too does the troubled lifespan of London's Millennium Dome. With the dome's financial failings making almost daily headlines, public support for the world's largest tent has all but evaporated. The question now is, Should it stay or should it go? As of late October, there was no clear answer.

Only 4.75 million visitors entered the dome through the first nine months of 2000, while 12 million were expected for the year. Some have suggested that the dome be taken down—a sort of architectural euthanasia. Prime Minister Tony Blair has admitted, in hindsight, the dome project has not been a success. Rather, it's become a political disaster, with politicians engaged in a blame game. Peter Ainsworth, the Tory culture spokesman, told the *Independent*, "The Government is in disarray over the Dome."

A "Future of the Dome" competition was initiated in March 1999 in effect to seek a buyer for the 59-acre site on the northern tip of the Greenwich Peninsula. This September, a bid by Japanese investment bank Nomura was accepted. Nomura proposed, beginning January 1, 2001, to retain both the structure and its function as a Disney-style theme park. However, two weeks after its selection, Nomura withdrew its $173 million offer. It remains to be seen whether Nomura's action was a ploy to drive down the price.

If not, the other short-listed bid by British consortium Legacy could be revived. Legacy also proposed to retain the existing structure, but it would employ London architect Lifschutz Davidson to convert it into a technology-oriented business park. Under Legacy, the dome would become, literally, a covered part of the city, complete with streets and boulevards.

The inclusive Legacy bid, with employment opportunities attached, appeals to London's planners and to the local community. It also fits into the original master plan for the peninsula. The 1996 master plan by Richard Rogers Partnership intended for the northern tip of the peninsula to house a business park—at one time the raison d'être for investment in North Greenwich.

Whatever the dome's future, the Royal British Mail intends to include the dome on a stamp in a millennium-year commemorative collection. *Adam Mornement*

Brooklyn's front stoop at museum entrance

Plans were unveiled on September 19 for a new $55 million entrance and renovation for the Brooklyn Museum of Art. The entrance is part of the museum's efforts to expand and diversify its audience.

The concept team of Arata Isozaki, Hon. FAIA, and James Stewart Polshek, FAIA, developed the ideas behind Polshek Partnership's redesign, which would transform the front entrance into a major civic plaza, with a new glass-and-steel lobby, tiered seating, reflecting pools, and a pair of fountains.

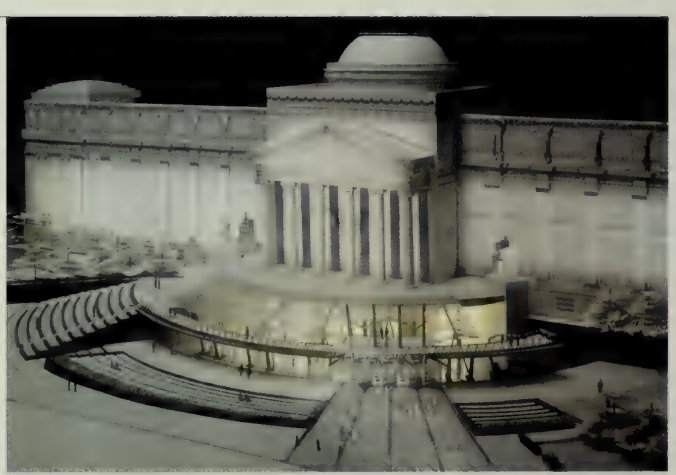
Arnold Lehman, the museum's director, told the city's Landmarks Preservation Commission that the project will make "a bleak and unwelcoming" entrance into "Brooklyn's front stoop."

The 1897 Brooklyn Museum of Art was designed by McKim, Mead & White with a grand staircase of 28 stairs leading from street level to a third-story entrance. The museum removed the deteriorating stairs in 1934, allowing easy access from ground level. The resulting open plaza, though, is what Polshek describes as "a kind of wasteland."

In the Polshek design, museum-goers can enter the building through an entrance pavilion to the renovated Grand Lobby at street level. Ascending a curved, amphitheater-style staircase at the east end of the pavilion or a staircase at the west end, visitors will arrive at a promenade-level entrance. The new pavilion entrance and renovated Grand Lobby will total more than 17,000 square feet of space. Water fountains will flank either end of a renovated street-level plaza. The project includes security-system improvements, new parking, interior renovations, and restoration of the building's facade.

Symbolically, the sweeping entrance reaches out to the Brooklyn community. It's also a focused entry experience, rather than the existing barren plaza.

If the city's Landmarks Preservation Commission approves the project, construction would likely begin in mid-2001, with completion in late 2002. Funding will include $5.8 million from Mayor Rudolph Giuliani, as part of the settlement from his 1999 lawsuit to evict the museum due to the controversial *Sensation* exhibit. *JEC*



Polshek's design adds a sweeping staircase and animated street-level plaza.





A staircase led to the museum (left), but has been gone (right) for 65 years.

The right door can make any place more inviting.





Now, think what our custom doors could do for your home. A door with no boundaries, save those of your imagination. A door handcrafted in the Old World style from the most beautiful hard woods available: Genuine Mahogany, Cherry, Maple, Walnut and Northern Red Oak. International Wood Products can deliver this door. All the way from your mind straight to your dream home. 1-800-877-9482 ext. IWP2 www.iwpdoor.com

IWP
Part of the JELD-WEN family

©1999 JELD-WEN, inc. All rights reserved. JELD-WEN, IWP and the IWP logo are registered trademarks of JELD-WEN, inc., Klamath Falls, OR.

CIRCLE 20 ON INQUIRY CARD







SPEAKMAN

www.speakmancompany.com
1.800.537.2107

CIRCLE 21 ON INQUIRY CARD

Now everyone will hear the music at the Hollywood Bowl

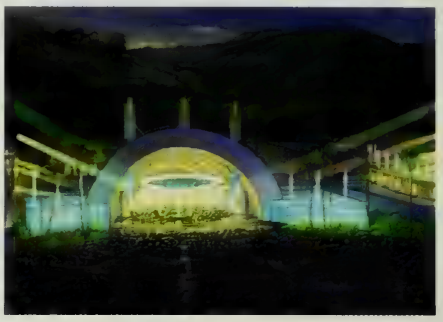
"The Hollywood Bowl is an icon, and our design maintains that image," says Hsin-Ming Fung, whose firm, Hodgetts + Fung Design Associates, of Culver City, Calif., has designed a new shell for the 71-year-old southern California landmark.

The existing shell is riddled with problems, including asbestos, lead paint, and poor acoustics. It's also too small for many events. Up to one-third of an orchestra's members must sit outside the shell and cannot hear the rest of the ensemble during performances.

More elliptical than the current version, the $16 million shell by Hodgetts + Fung would provide 25 percent more stage space, allowing all members of the Los Angeles Philharmonic Orchestra, its main tenant, to finally fit on stage. The chief concern for Hodgetts + Fung, however, was sound. In the existing bowl, musicians are often unable to hear any other instruments but their own. "The conical shape of the current bowl simply bounces the sound around inside it," says Eric Holmquist, project architect on the bowl.

Earlier attempts to address sound quality were made, with limited success. In 1970 Frank Gehry, FAIA, installed large cardboard tubes inside the shell. A decade later, he designed fiberglass spheres that still hang inside the shell.

Within Hodgetts + Fung's elliptical shell is a floating oval canopy with seven rows of movable



Hodgetts + Fung's design for the Hollywood Bowl

panels that disperse sound evenly across the stage and out into the sloping, 17,500-seat bowl.

New dressing rooms would flank the stage, replacing rundown facilities where raccoons often lurk. To maintain the visual integrity of the shell, matching sets of waterfalls cover the backstage area on either side of the shell. Hodgetts + Fung created an unusual exterior envelope for the shell. Immediately beneath the roof line rows of steel-clad steps will descend. As pyrotechnic platforms, they will provide small launching pads for fireworks—a long-time staple of bowl performances.

The Los Angeles County Board approved an environmental impact report for the bowl in late September. Respondents had 30 days to file any opposition to stop construction. If there is no opposition, construction will begin in 2001 with completion of the shell in 2002. *David Hay*

Which way to green? DOE roadmap leads the way

Thirty-two percent of electricity generated in the United States is used to light, heat, and cool commercial buildings. The U.S. Department of Energy (DOE) has developed a plan to reduce that percentage.



Four Times Square

The DOE and 21 co-sponsoring organizations launched a building industry–generated initiative, "High Performance Commercial Buildings: A Technology Roadmap," outlining methods to achieve increasingly energy-efficient, environmentally friendly, comfortable, and performance-enhancing commercial buildings. The goal is to reduce energy consumption in new commercial buildings by 20 percent by 2010 and 50 percent by 2020.

The guidelines identify high-priority needs for research and development (R&D), as well as actions necessary to make greener buildings a reality. The Roadmap, in part, provides a framework for the private sector to obtain R&D support and tax credits from state and federal legislators.

Robert Fox, AIA, a principal of Fox & Fowle Architects and designer of the energy-saving office tower at Four Times Square, introduced the plan at a press conference at the National Building Museum in Washington, D.C., on October 4.

More than 150 organizations contributed to the Roadmap's development over a 30-month period. The American Institute of Architects (AIA) and AIA Center for Building Performance and Environment collaborated with the DOE in developing the plan. *Karen Haas Martin*



Key Characteristics

abrasion resistant–rated for heavy duty commercial use

floor tiles available in both standard & slip-resistant finish

standard exceeds ADA standards when dry

slip resistant exceeds ADA standards wet & dry

unaffected by UV light

frost resistant

stain resistant

environmentally friendly; made with all natural materials

chemical resistant

waterproof

floor tiles are also suitable for walls

easy to maintain

any image can be customized on to a tile

PHOTO CREDIT © DUB ROGER NYC 2000

Let your imagination run tiled

River Rocks installed in XOXO dressing room in Soho, N.Y.C., store

For information on stock tiles and our custom capabilities, please call Imagine Tile or visit our website

1.800.680.tile

www.imaginetile.com

CIRCLE 22 ON INQUIRY CARD

imagine tile™

Mather's plan adds human touch to brutal South Bank

After previous redevelopment schemes for London's South Bank by Terry Farrell (1989) and Richard Rogers (1994) failed, a proposal by Oregon native Rick Mather is the latest attempt to make the prestigious, but harsh, riverside arts complex user-friendly. Mather unveiled his South Bank master plan in February, and a number of the components for the 30 acres between County Hall and Waterloo Bridge are moving forward.

With concrete ramps crisscrossing the Brutalist complex, which includes Royal Festival Hall and Hayward Gallery, one major challenge for Mather's London-based practice was to improve orientation and access. His scheme emphasizes ground-level circulation rather than existing overhead walkways. It will also promote a mix of pedestrian-oriented new development, including restaurants, shops, offices, and residences.

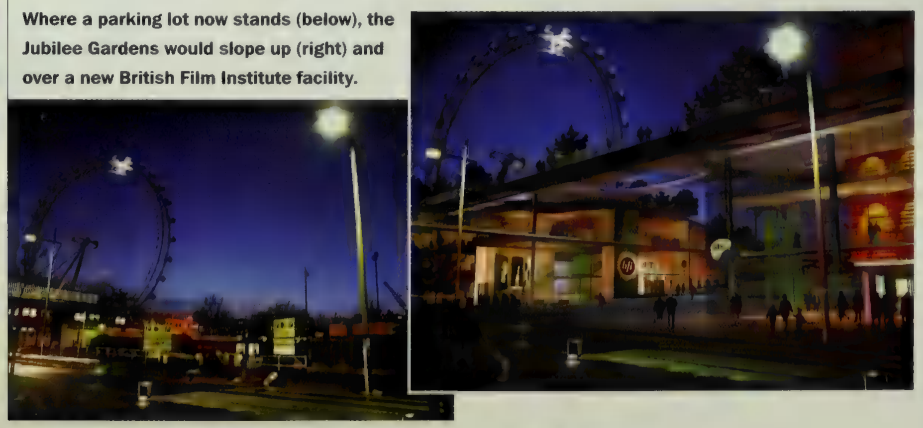
One of the plan's most popular aspects is its potential to increase open space. Together with the imaginative Dutch landscape architects West 8, Mather has devised a 5½-acre park—an expanded Jubilee Gardens—that will slope up from the Thames to three stories above grade. Beneath the Jubilee Gardens will be a new center for the British Film Institute—a complex that will incorporate the National Film Theatre's three cinemas, an expanded Museum of the Moving Image, and parking for 380 cars.

The South Bank Centre, the sole client for the South Bank site, will soon announce international architectural competitions for the arts buildings under Jubilee Gardens and a competition for a landscape architect for the whole South Bank study area. Work is expected to start on the Jubilee Gardens and arts buildings in 2002.

Jubilee Gardens, as well as Royal Festival Hall and Hayward Gallery, are managed by the South Bank Centre. Work has begun on a renovation of Royal Festival Hall by Allies and Morrison, and the firm has submitted a planning application for a hall extension. The estimated budget for the Festival Hall renovation and addition is $40 to $50 million. The adjacent Hayward Gallery will be refurbished and extended with a new street-level entrance and expanded exhibition space. A new performance venue may be built where Queen Elizabeth Hall and the Purcell Room currently stand. Competitions for the Hayward site will be announced in 2001. *Laura Iloniemi*



The South Bank (top) would be transformed (above) with the new Jubilee Gardens.



Where a parking lot now stands (below), the Jubilee Gardens would slope up (right) and over a new British Film Institute facility.



BUDDY RHODES STUDIO

ARTISTIC CONCRETE PRODUCTS

CUSTOM COLORS & SIZES

TOLL FREE NO. 877 706 5303

www.buddyrhodes.com

SAN FRANCISCO

CATALOG AVAILABLE UPON REQUEST

CIRCLE 23 ON INQUIRY CARD



WHY LAS VEGAS HILTON'S SPACE QUEST CASINO RELIES ON SLOAN FAUCETS AND FLUSHOMETERS

When you're transported to the 24th century, manual flush valves and faucets just won't do.

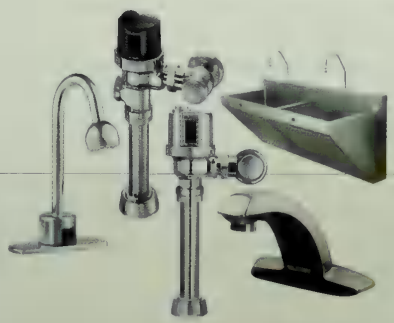
The Las Vegas Hilton's Space Quest Casino needed fixtures to reflect that modern technology. They chose SLOAN'S ADA compliant Optima Plus® Flushometers and Optima® ETF-80 faucets for their restrooms to add style without sacrificing performance.
The recently opened entertainment center chose Sloan Optima Plus Flushometers to integrate time-tested hydromechanics and modern electronics. Sloan's Perfect Sense® EL-1500 Optima sensor utilizes advanced electronics that adjust automatically to surroundings and changing conditions. Sloan's Optima Plus Flushometers have their own LED diagnostics. The Optima's Sentinel® system is electronically programmed to automatically flush after 24 hours of non-use, ensuring fresher restrooms and reducing corrosive buildup.

Sloan blends state-of-the-art electronics, timeless craftmanship and styling in Hilton's ultra-modern restroom to orchestrate both form and function.

For example, Sloan's Optima ETF-80 hygienic and automatic faucets use infrared technology to sense a user's hands and automatically adjust to changing environments. Plus, the new sleek, sophisticated design and contemporary styling elevates the standard for elegance.

IF THE 24th CENTURY RELIES ON SLOAN, SHOULDN'T YOU?...Call today!

Learn why entertainment centers choose the performance of Sloan. Call **800-745-0800**, or circle the number below for a copy of our full-line catalog/CD-ROM.



SLOAN®

Sloan Valve Company
10500 Seymour Avenue • Franklin Park, IL 60131
Phone: 800-745-0800 • Fax: 800-447-8329
www.sloanvalve.com

CIRCLE 24 ON INQUIRY CARD

ITALIAN





Receive your free Marmora book with ASTM and buyers guide

www.marblefromitaly.com

Italian Trade Commission
1801 Ave of the Stars
Suite 700
Los Angeles CA 90067
323 879 0950
Fax 310 203 8335

CIRCLE 25 ON INQUIRY CARD

Ambitious development proposed for downtown Chicago

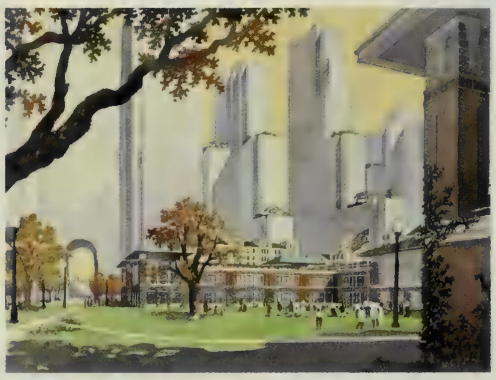
A 25-acre development planned by Skidmore, Owings & Merrill (SOM) may drastically change a prominent portion of downtown Chicago. Twelve residential towers, some as tall as 60 stories, two office towers, two hotels, 200 low-rise townhouses, and a public school will surround a new public park in the area planned as Lakeshore East. SOM unveiled its master plan for the $1.5 billion development, a project of Magellan Development Group Ltd. and Near North Properties, in September.

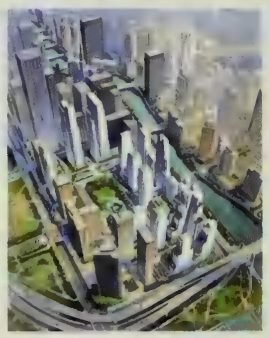
Bound by Wacker Drive and the Chicago River to the north, Lake Shore Drive and Lake Michigan to the east, Randolph Street and Grant Park to the south, and Columbus Drive to the west, the privately owned land now has a nine-hole golf course and driving range. To the west is Illinois Center—a constellation of office towers and hotels with elevated, multi-tiered roadways and a lack of through streets. By contrast, says SOM principal Adrian Smith, FAIA, "The planning of the [Lakeshore East] project tries to integrate the area into the city as a whole."

Five apartment towers are planned with a total of 2,000 units, and seven towers will include 2,350 condominium units. Approximately two million square feet of office space is projected. Although it still encompasses several buildings, the scheme has been downsized to appease city officials and nearby residents. Smith expects a number of architectural firms will design the buildings but suggests that SOM will, in the initial phase, design townhouses, as well as a condominium tower on Randolph Street that will provide a gateway to the new neighborhood.

The SOM proposal supersedes one submitted by Fujikawa Johnson and Associates, the firm that planned Illinois Center, in 1999. That scheme, notes Chicago Department of Planning and Development spokesman Peter Scales, "called for a linear park broken up by towers. It evolved with SOM to more of a neighborhood development. We're pretty excited about it."

Following a series of community meetings, Chicago's planning commission and city council will review SOM's submission. If approved, construction could begin in mid-2001. The entire project is expected to take up to 15 years to complete. *Tom Connors*



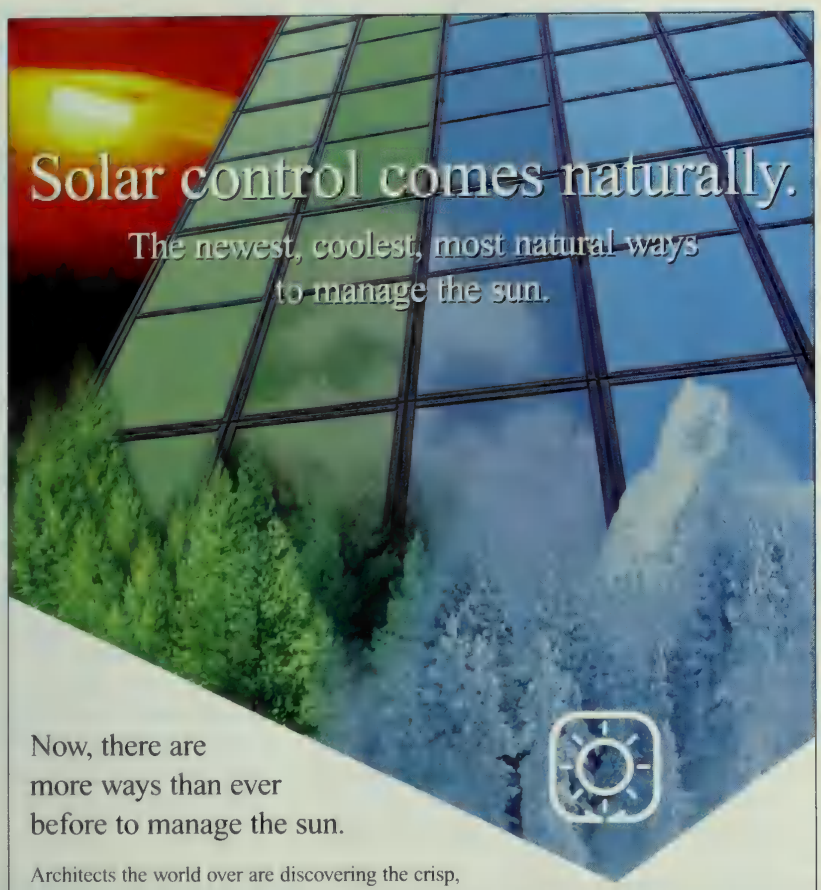


The Lakeshore East neighborhood (left) would be centered around a park. A new public school would be located on the park (above), adjacent to low-rise townhouses. Seven condominium towers and five apartment towers are planned.

U.S. hosts its first ELEA, students from 18 countries attend

The 17th Encounter of Latin American Students of Architecture (ELEA), the first in the United States, was held in Los Angeles, October 1-7. ELEA is the annual meeting of the Council of Latin American Students of Architecture (CLEA), an organization of Latino architecture students and recent graduates. More than 1,200 students from 18 countries attended, many visiting the United States for the first time.

Organized by mainly first- or second-generation American students from Southern California, this year's ELEA emphasized the growing diversity of the United States. Speakers included Jorge Silvetti, Assoc. AIA, Enrique Norten, Billie Tsien, AIA, Michael Rotondi, FAIA, and Antoine Predock, FAIA. Discussions on architecture and design, while the clear focus of ELEA, were secondary to the overall goal of expressing a general cultural experience. Evening highlights were performances of song, dance, or a short skit by each country's delegation. Colombia will host the 2001 ELEA. ***Casius Pealer***



Now, there are more ways than ever before to manage the sun.

Architects the world over are discovering the crisp, natural beauty of the newest Pilkington architectural glass products.



Pilkington **Arctic Blue Eclipse™** Glass: Woodland Corporate Park II, Indianapolis, Indiana

Like the cool look of Pilkington **Arctic Blue™** High-Performance Tinted Float Glass, combining excellent solar performance in an affordable tinted glass.

And the superior performance of Pilkington **Arctic Blue Eclipse™** Reflective Glass, with its durable pyrolytic coating.



Pilkington **EverGreen Eclipse™** Glass: Republic Bank, St. Petersburg, Florida

Or the ever-popular natural look of Pilkington **EverGreen™** High-Performance Tint, now with it's own pyrolytic coating in Pilkington **EverGreen Eclipse™** Reflective Glass.

And all can be combined with color-neutral Pilkington **Energy Advantage™** Low-E Glass for optimal performance in an I.G. unit.

See for yourself at **www.pilkington.com/sunmanagement**, or contact your Pilkington representative for more details.

Pilkington Building Products, North America
P.O. Box 799, Toledo, OH 43697-0799
Telephone 419 247 3731, Fax 419 247 4517
www.pilkington.com/northamerica
www.pilkington.com/sunmanagement

PILKINGTON

©2000 Pilkington
Arctic Blue™, **Arctic Blue Eclipse™**, **EverGreen™**, **EverGreen Eclipse™**, **Energy Advantage™** Low-E Glass and **Sun Management™** System are trademarks of Pilkington.
Photos may vary from glass color. Please see glass samples from Pilkington.



…at your fingertips!

It's all waiting for you at **www.pilkington.com/sunmanagement**.

- The exclusive Pilkington **Sun Management™** Interactive Calculator that lets you compare performance values for various glass combinations, and even…
- Generate **custom glass specifications**, in CSI format, ready to print, save as a file, or cut and paste right into your own project spec!
- A photo gallery of noteworthy projects
- Our complete Sweets™ catalog in electronic form
- A comprehensive library of Architectural Technical Bulletins
- Frequently Asked Questions about glass and glazing…and much more.

And it's all at your fingertips, at the Pilkington **Sun Management™** website.



Your number one source for glass information.

PILKINGTON

Pilkington Building Products, North America
P.O. Box 799
Toledo, OH 43697-0799
Telephone 419 247 3731; Fax 419 247 4517
www.pilkington.com/northamerica
www.pilkington.com/sunmanagement

©2000 Pilkington
Sun Management™ System is a trademark of Pilkington

CIRCLE 26 ON INQUIRY CARD

News Briefs



(from left) Krens, Gehry, Koolhaas

Guggenheim, Gehry, Koolhaas form alliance The Guggenheim Museum is entering an alliance with Frank O. Gehry & Associates and Rem Koolhaas' AMO, an architectural consultancy focusing on the potential of the unbuilt. According to the Guggenheim, Koolhaas and Gehry will work with the museum to position it internationally and to emphasize the importance of architecture in a contemporary context. The alliance's first project is a study for the expansion of the State Hermitage Museum within a 450,000-square-foot General Staff Building in St. Petersburg. In a joint statement, Koolhaas, Gehry, and Thomas Krens, director of the Solomon R. Guggenheim Foundation, said, "Our work will not necessarily result in a museum building, or a building designed by either architect, or a Guggenheim Museum per se. Rather, we are interested in developing aesthetic concepts in an intensely practical context. We are interested in working with local institutions in local situations to create something unique and special."



Chicago bungalows

WWW All the architectural news that's fit to print . . . and more. For up-to-date headlines each weekday, click on ***News*** *at:* ***www.architecturalrecord.com***





The Chanin Building's re-created bronze bas-relief features stylized patterns.

Chicago honors the bungalow Chicago Mayor Richard M. Daley has announced the availability of financial incentives to preserve and restore the city's bungalows. Under the Historic Chicago Bungalow Initiative, loans requiring only 3 percent down payment will be available to anyone wanting to purchase or rehabilitate a Chicago bungalow. Free architectural assistance and up to $3,000 in energy conservation grants are also available. Next year, a series of conferences, seminars, and tours will celebrate the 80,000 to 100,000 bungalows built in Chicago from 1914 to 1940. The Chicago Architectural Foundation will host a bungalow exhibition in fall 2001.

Art Deco bas-relief re-created for New York building A.R.T. Research Enterprises, a fine-art foundry based in Lancaster, Pa., has re-created a 35-foot section of a 400-foot bronze Art Deco bas-relief, matching the rest of the 70-year-old panels that wrap around the Chanin Building on E. 42nd Street in Manhattan. The section was removed in the 1960s when a HoJo's restaurant moved into the building.



News Briefs



Bruder (left) and Corner

Bruder and Corner win Chrysler Awards Architect Will Bruder and landscape architect James Corner were honored on October 25 as recipients of the Chrysler Design Awards, which recognize innovators in architecture, environmental design, electronic media, and graphic and industrial design. Bruder, based in Phoenix, designed the Phoenix Central Library. Corner, a professor of landscape design at the University of Pennsylvania, is conducting a study for the redevelopment of Alvsjo, Sweden.

Kallmann, McKinnell, and Wood Architects chosen for Blanton The University of Texas at Austin has selected Boston's Kallmann, McKinnell, and Wood Architects for the Jack S. Blanton Museum of Art project. Herzog & de Meuron resigned the commission last year after a disagreement with the university board of regents.

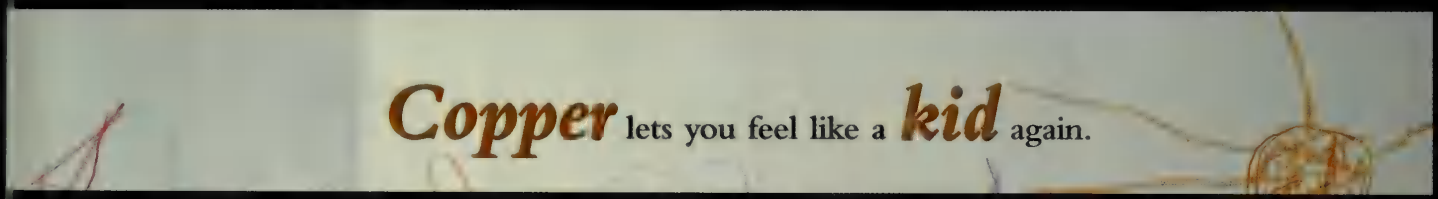
"Structures for Inclusion" deals with other 98% "Structures for Inclusion: Designing for the 98% without Architects," a one-day conference held on October 7 at Princeton University, explored the work of community design centers, nonprofit organizations, and design-build programs in the design of housing. Speakers, including Samuel Mockbee, FAIA, Robert Gutman, Hon. AIA, of Princeton University, and Dana Cuff of UCLA, examined why only two percent of new homebuyers in the United States work with an architect. The conference was organized by Design Corps.

Predock unveils Pueblo library design The design for a $20 million addition to the McClelland Library in Pueblo, Colo., was revealed in October by Antoine Predock, FAIA. The building will include a number of shaded terraces and a courtyard inspired by Spanish *resolanas*, or "places to sit and converse in the sun," according to Predock. Construction will begin in 2001.



Predock's library design for Pueblo, Colorado

Lawsuit attempts to stop WW II Memorial Organizations opposed to the proposed World War II Memorial in Washington D.C. [SEPTEMBER 2000, page 40; OCTOBER 2000, page 19] filed suit on October 2 in U.S. District Court against the federal agencies and commissions that gave approval for the memorial. Joining the National Coalition to Save Our Mall in the suit were World War II Veterans to Save Our Mall, the Committee of 100 on the Federal City, and the D.C. Preservation League. The lawsuit is an attempt to stop the National Park Service from issuing a construction permit. The suit claims authorizing bodies "have violated their congressionally mandated responsibilities" by not following federal laws that dictate the memorial-approval process. The National Capital Planning Commission gave final memorial approval in a 7-5 September vote.



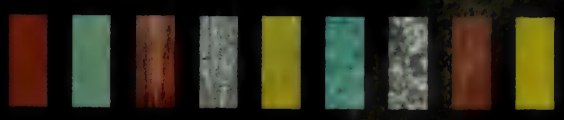
From rich, natural earth tones to bright blue-greens to shimmering silvers and elegant grays, copper comes in a full pallet of colors, textures and finishes. And the Copper Development Association provides the design assistance, information resources and technical specifications to help you use them.

Discover the unique colors of copper. And rediscover the thrill of opening that *big* box of crayons. For supplier information or help on a specific project, call 888-427-2411. Visit us on the Web at *http://architecture.copper.org*.



Project: University of Toledo — Center for the Visual Arts
Architect: Frank O. Gehry Associates

COPPER
Unique. Beautiful. Enduring.



CIRCLE 27 ON INQUIRY CARD

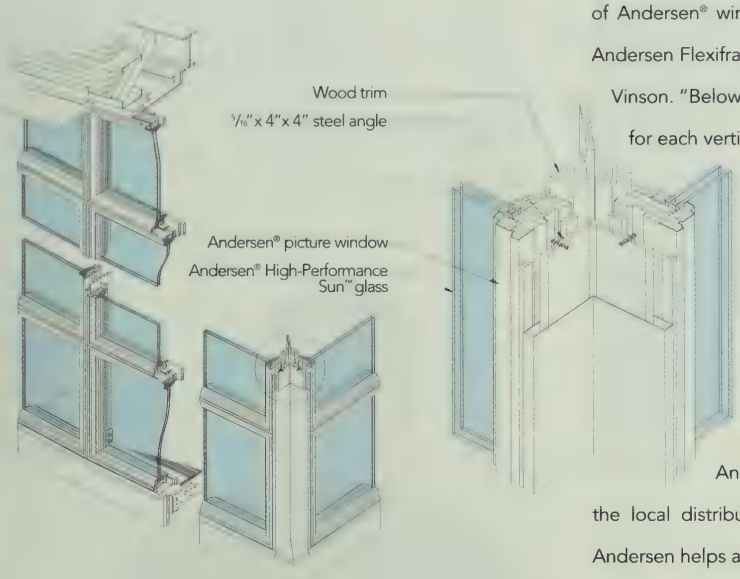


"Andersen," the AW logo, and "Flexiframe" are registered trademarks of Andersen Corporation. All other marks where denoted are marks of Andersen Corporation. © 2000 Andersen Corporation. All rights reserved. 0332A



ARCHITECTURE DEFINED

ANDERSEN FLEXIBILITY REFINED



"We wanted our new offices to be a statement about what we do as architects," said Director of Design Clarence Vinson. The result? Using interlocking forms, spatial planes and contrasting materials, this firm defined its profession, and refined the role of Andersen® windows in commercial design. "We used the Andersen Flexiframe® windows in a truly flexible way," said Mr. Vinson. "Below the curved roof soffit, we specified the height for each vertical mullion and the windows were made to fit the arc without curving themselves. Below them, Andersen helped us create a wall of windows by using their standard sized windows with low maintenance exteriors and energy efficient glazing." Andersen people were flexible, too. Said Mr. Vinson, "From the expert support of the architects at Andersen Corporation, to on-time delivery by the local distributor, everyone was incredible." This is how Andersen helps architects achieve imaginative, flexible window solutions. Call on us to play a definitive role in your next project.

Get a CD-ROM portfolio of this and 160 more projects, and our catalog, by calling 1-800-426-7691 reference# 3661.

ANDERSEN® COMMERCIAL

Andersen AW Windows·Patio Doors

www.andersenwindows.com

CIRCLE 28 ON INQUIRY CARD



"No photo eyes means no callbacks. I'm making it automatic in my homes."

Jim Ayers, Builder
Hendersonville, NC



"Safe, quiet, real cutting edge Wayne-Dalton sure has the handle on innovation."

Bill Davis, Builder
Fort Walton Beach, FL

Our new DoorMaster™ garage door opener is the talk of the industry.

(You have their word on it.)

The DoorMaster garage door opener has it all: wireless technology to reduce builders' construction time and costs; no photo eye requirements, so misalignment callbacks are eliminated; quiet operation; and customized light location.

Plus, it has no unsightly rails or ceiling-mounted power unit, no exposed springs, no door operating arm; it's highly sensitive to obstructions; and features exclusive, built-in safety features. The DoorMaster opener, when combined with a WayneGard pinch resistant door, makes the first ever UL Listed door and opener system.

It's revolutionary, and you can quote *us* on that.



FreeVideo

To receive a free short video on the new DoorMaster opener, log on to www.wayne-dalton.com/video Or call 888-215-2225.



Wayne® Dalton

You want a Wayne-Dalton door system. (Just to be safe.)

Wayne-Dalton Corp., Mt. Hope, OH 44660 © 2000, Wayne-Dalton Corp.

CIRCLE 29 ON INQUIRY CARD

Clear on the periphery: Discovering the edge of Portland

Correspondent's File

By Suzannah Lessard

In the 1970s, radical land-use legislation was introduced in Oregon by state senators Stafford Hansell, a Republican pig farmer, and Hector Macpherson, a Republican bean farmer, with the backing of Republican Governor Tom McCall, whose brainchild it was. In a coalition that would make the state's political quirkiness a legend, rock-ribbed rural conservatives allied with progressive city dwellers to pass legislation that was, on the whole, opposed only by merchants. One of the law's more dramatic features—especially in the light of the sprawl explosion that happened elsewhere—was the requirement that all municipalities, no matter how small, adopt an urban growth boundary beyond which residential and commercial development would not take place.

Because both the placement of boundaries and their enforcement were left up to each community, some interpretations were looser than others. Portland, however, interpreted the law strictly, and while its growth boundary is not the only one in the country, it is the most prominent. For that reason, I explored the edge of Portland to see what had happened since the boundary was adopted in 1979.

When the legislation passed, timber, the mainstay of the region, had cratered and the economy was flat. In other words, there wasn't a lot of money to be made through growth anyway, which is probably one of the reasons that the bill passed. Furthermore, the boundary in Portland, as in most places, was set far beyond the city limits, enclosing much undeveloped land that, given the state of the economy, was not likely to be developed for some time. Thus, in Portland and elsewhere in the state, the urban growth boundary was little more than an abstraction in the beginning.

Since that time, however, the economy has revived and Portland has boomed. As a result, the city has filled out to the line that is no longer abstract but dramatically visible. The edge of Portland is now as sharply delineated in many places as the edge of fortified hill towns in medieval Italy.

Adding people, not land

To understand the impact of the boundary, it is necessary to examine the context of Portland's growth. From 1970 to 1990, the Portland metropolitan area saw a 50 percent increase in population but only a 2 percent increase in land consumption; by contrast, the metropolitan Los Angeles area saw a 45 percent increase in population during the same period and a 200 percent increase in land consumed.

Today, about 1.3 million people live within the 24 municipalities and 369 square miles enclosed by the Portland metropolitan area's growth boundary. The boundary itself has been adjusted about three dozen times and has had two general expansions, in 1998 and 1999, adding nearly 4,000 acres for more than 18,000 housing units.

Travelers to Portland don't necessarily see a demarcated edge to the bounded area because the airport is within the city and the interstate blurs the transition with its own domineering, standardized momentum. In fact, it's quite difficult to explore the boundary by car because the boundary is not traced by roads: Rarely do local roads on either side lead to it, much less cross it.

In most places the boundary is marked by closely set backyards abutting farmers' fields. You might be able to peer between houses into the country, but to drive to the country is not easy—either there are no roads on the other side, or if they exist, access to them is so far away that by the time you find it you have lost your bearings.

In a few places, however, a road will actually form the boundary, with dense housing on one side and open fields on the other.



Neighborhoods are adjacent to open land along the Portland growth boundary.

This arrangement presents an idea in action in the landscape. In contrast to the universal experience of sprawl seen on the periphery of most urban areas, the visual impact of Portland's boundary is almost eerie. Instinct tells you that where there is dense residential development, all nearby fields are living on borrowed time. It's only when the open vista continues for mile after mile that the imagination grasps that the identity of the countryside is as distinct as that of

Suzannah Lessard, author of The Architect of Desire: Beauty and Danger in the Stanford White Family, *is working on a book about sprawl.*





With land limited, compact new housing is built within the Portland boundary.

the city, though they lie side by side.

From outside the boundary looking in, you can see condominiums crowding down a hillside to a sudden halt. But there again, it is difficult to move from one realm to the other. This impermeability gives the boundary a certain mystery. In some places, the street grid of the urban area is frayed to a mere ghost—leading nowhere.

Variations on the edge

Variations on the boundary exist. "Rural residential areas" were partially built up when the boundary was set. Here, pumpkin field and pastures are intermixed with tight clusters of development in which it would appear that every allowable bit of expansion has taken place.

Several suburbs that were small towns outside the city when the boundary was adopted offer another variation. These communities were given generous latitude for growth and are either connected to the city by an urban corridor or are themselves almost entirely surrounded by open space.

With the boundary filled out, Portland enters a new chapter. Because fortunes can be made in development now, pressure to dissolve the boundary is growing. The Homebuilder's Association, which for many years supported the land-use legislation, is now particularly unhappy because instead of large swaths of land to develop subdivisions of multiple homes, it must look to infill sites and the fragmentary undeveloped parcels within the boundary.

A product of its time

If land-use legislation were proposed in Oregon today for the first time, it probably would not pass. But because it has been in effect for more than 20 years and has become part of the culture, it is unlikely that challenges from the homebuilders or anyone else will prevail. As a result of the boundary, everything within the city becomes ever more significant, ever more precious. Controls consequently tighten as a collective sense of the city becomes more important than property rights.

The next stage of this intensification is likely to be aesthetic. As is clear in much of outer Portland, restraints on style were few when the boundary was strictly enforced. Design review, which for a long time was applied only downtown, has now been initiated in a number of residential neighborhoods, a pattern that is likely to become more widespread with time. Indeed, city planners acknowledge that design review is being used as a planning mechanism. Thus, embracing aesthetic values becomes the next step in civic responsibility and affirmation of the commonwealth.

The city set in a countryside represents an idea, a choice, and a powerful, sustained political effort. Metropolitan Portland stands in defiance of Manifest Destiny as a place of civic and scenic importance. ■

FIREPROOFING WORTH THE LOOK!

A/D FIREFILM® II

Decorative Thin-Film Fire Resistive Coating for Structural Steel

A/D FIREFILM® II combines ratings up to 3 hours with the appearance of exposed steel.



Photo: Sacramento International Airport, Terminal A
Architect: Dreyfuss & Blackford Architects
Photo: Cathy Kelly Architectural Photography
A/D FIREFILM® II on structural steel.

A/D FIRE PROTECTION SYSTEMS

Call 1-800-263-4087

CIRCLE 30 ON INQUIRY CARD

PAREXEIFS®

PB SYSTEMS•FLEXIBLE PM•SECONDARY BARRIER•DRAINAGE PM•DRAINAGE PB



Just ask us...

PAREX®

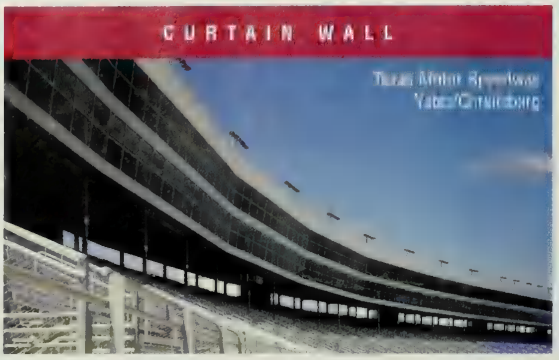
100%
ACRYLIC
POLYMERS

MEMBER OF

800-537-2739 PAREX Inc. Headquarters: 1870 Stone Mountain-Lithonia Rd, Redan, GA 30074
800-780-6953 Western Region: 11290 South Vallejo Court, French Camp, CA 95231
Look for us on the Internet at:
http://www.parex.com

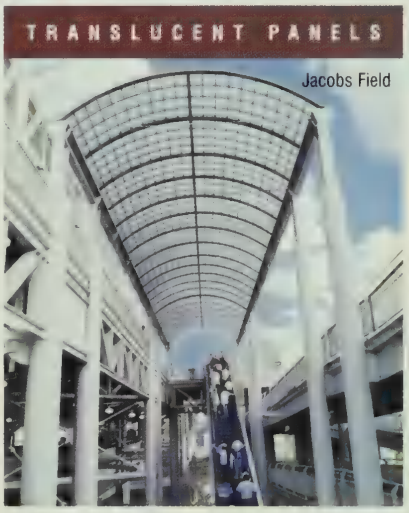
CIRCLE 31 ON INQUIRY CARD

WE'RE BUILDING CHAMPIONS.





Anaheim Sports Arena / HOK Inc.





Champions aren't born, they're built – from the sturdiest foundation to the crowning glory.

Season after season, The Vistawall Group, consistently puts together champions.

Whether it's our curtainwall and skylights or our custom windows and doors, we've put together a line of high-performance products and services that's hard to beat.

The Vistawall Group has provided architectural products for some of the finest sports facilities in the country. We're your single source supplier: designing, engineering and manufacturing custom products for everything from ballparks to horse tracks.

The Vistawall Group. We've got the makings of a champion.

THE VISTAWALL GROUP
BUTLER MANUFACTURING COMPANY

800-869-4567
fax: (972) 551-6264
http:\\www.vistawall.com

CIRCLE 32 ON INQUIRY CARD

THE VISTAWALL GROUP
BUTLER MANUFACTURING COMPANY

VISTAWALL ARCHITECTURAL PRODUCTS
MODULINE WINDOW SYSTEMS
NATURALITE SKYLIGHT SYSTEMS
SKYWALL TRANSLUCENT SYSTEMS

Practice Matters

By Jeffrey L. Kinzler, B. Arch., J.D.

Although most architects manage their practices well, two different kinds of lawsuits may befall the practicing architect. The first involves personal injury or property damage resulting from failure to exercise the appropriate standard of care during the design of a structure.

For example, say that a piece of a brick facade falls, causing property damage and/or personal injury, and it is found that the brick anchors were improperly designed or specified by the architect. In this situation, the injured party needs *no direct contractual relationship* with the architect to recover damages, because the architect's legal duty to that person arises from the foreseeable obligation to protect members of the public. In such cases, liability ultimately turns on questions of fact about the cause of the structural failure and how it resulted in the alleged injury. Often, other parties who were involved in the construction process are sued as well, and liability may be apportioned among them.

Malpractice lawsuits, on the other hand, stem from the claim of a client, with whom the architect *has a direct contractual relationship,* that an economic loss was suffered because the architect failed to perform the contract according to the appropriate standard of care. In the previous example, the owner of the building who hired the architect would have a malpractice claim against the architect for all the costs related to repairing the facade that failed as a result of the improperly specified brick anchors.

While malpractice lawsuits sometimes have a legitimate basis, they are, unfortunately, also used by crafty individuals who simply want to avoid paying the architect's fee, or worse, who try to force the architect to pay for the cost of construction. Because malpractice cases are often mired in complex factual issues, the outcome of the case is often determined by whose records are the most complete and credible. This article will focus on avoiding these costly and unpleasant lawsuits by actively managing the architect-client relationship throughout the design and construction process. An added benefit is that good records put the architect in a stronger position to be fully paid for the work and to deflect inappropriate claims by the client or the contractor.

Jeffrey L. Kinzler is a graduate of the Pratt Institute School of Architecture and Benjamin N. Cardozo School of Law. His law practice specializes in architect-engineer professional liability and school construction.

Defining malpractice

It is worthwhile to review some basic legal terminology here. The architect's liability for malpractice claim situations hinges upon performing the services set out in the contract according to the standard of reasonable care. The classic definition of this phrase is that the architect is required to do what a reasonably prudent architect in the same community would do given the same circumstances.

To bring a claim for malpractice the client must allege that (1) the architect had a duty to perform services pursuant to a contract; (2) there was a breach of the contract by failure to perform the services according to the proper standard of care; (3) the client suffered an injury as a result of the breach, and (4) actual damages resulted.

Your scope of work

Where architects often get into trouble with their clients is in failing to make sure that the client understands exactly what services are included in the scope of work and what is not included. The design professional cannot be held liable for failure to perform services that are outside the contractual scope of duties. Therefore, your written proposal should lay out, in an extremely clear fashion, the scope of your work, your fees, and your reimbursable costs. Clients will respect you for taking a forthright approach to describing what you are going to do for them and making realistic allocations of the cost and time required to complete all of the work properly. The proposal must be signed by you and the client, and at that time it becomes a binding contract rather than a proposal. This must be done before you commence work. Some clients, especially institutional and governmental ones, will insist on using their own contract forms, so before you sign make sure they include all information necessary to thoroughly describe your services, fees, and costs; also be sure that the form does not obligate you to perform tasks beyond the proper scope of your services.

Be sure to respond to all of the questions and concerns raised by your client, and address them intelligently in your proposal. Much of what constitutes reasonable care in the exercise of your professional duties should become clear to your clients if you have a frank and thorough discussion about the scope of work and the extent of services provided.

Address the possibility of hidden and unknown conditions in your proposal before the agreement is signed. Help them understand and plan for contingent design and construction costs within their overall budget. The less experienced the client is, the more important such a discussion becomes; never assume, however, that a large client, such as



a governmental agency or corporation, has any greater understanding of these issues than a small client.

Surprisingly, many architects skip this discussion, possibly because they worry that their clients, when confronted with what the architect can and cannot do for them—and with the serious responsibilities that clients must accept—will get cold feet and not accept the proposal. This is a legitimate fear, especially with clients who have never built before or who may in fact be predisposed to litigation no matter how well you do your job. Still, it is far better to make these points clear to the client at the outset than to risk uncertainty and misunderstandings that might lead to litigation. A meeting should also be held once bidding has occurred and a contractor has been selected, so that the client and contractor also understand their responsibilities with respect to each other and to the architect as well.

YOU HAVE TO FIND OUT WHAT YOUR CLIENTS KNOW AND FILL THE GAPS IN THEIR UNDERSTANDING ACCORDINGLY.

Unfortunately, tales are legion of the design professional who, after going that extra mile to "help the job" or appease an angry client, wound up in a lawsuit. The simple lesson here is that it is very risky to proceed with a client who refuses to recognize and accept the limits of your responsibilities in relation to the overall project. It is far easier to establish and maintain this understanding in the beginning of the relationship than to try to repair it after the fact.

Communications and records

Good communications and good record keeping go hand in hand with reducing your chances of a lawsuit and will place you in a position to vigorously defend yourself and your firm against any claims that do occur. An added benefit is that it strengthens your ability to collect all the fees you are entitled to. Once the job is under way, the best way to protect yourself is to maintain clear and timely communications with everyone involved. The outcome of each meeting or telephone call should be recorded in writing, with copies going to all of the parties involved. Keep written, detailed records of discussions you have with the client, contractor, and any subcontractors. E-mail should be printed and kept in the file. Bear in mind that all electronic records maintained in your office are subject to discovery in a legal proceeding.

However, there are impediments to good job documentation, and if your firm has problems in this area, you should think again about how to organize and empower your staff. The authority for decision making and documentation on each job must be clearly assigned to someone, and everyone in the firm must understand what the scope of work actually entails and how critical their job logs are to protecting the firm from lawsuits. Record keeping must be at its best when your office is busiest and when pressure to get the project done is greatest.

Beyond the scope of services

You must inform your client that changing the scope of your work will increase your fee if it causes you to perform work beyond your original agreement, and that it may result in additional construction costs as well. This should be done before the initial proposal is signed. After work commences, any verbal communication with the owner that involves an actual or potential change in your scope of work must be confirmed in a clearly written letter and with a memorandum to the file. This is an instance where it is especially important that everyone in the firm understand what your contract covers and who is authorized to make changes to it. For example, a young person just out of school might not appreciate the financial consequences of proceeding with a design change to accommodate an unknown site condition—it could result in extensive redesign of the building and have an impact on the cost of construction as well. If you have educated your client properly, a field condition such as this will be understood as a normal risk assumed by the client in the construction process rather than as your mistake and financial responsibility. You may choose to absorb certain costs as a goodwill gesture, but you are no more responsible for unknown field conditions than the contractor and should not volunteer to do more than a reasonable amount of work to accommodate the situation.

Get it in writing

You should never commence additional work on an owner- or contractor-requested change until the client has signed an addendum to your contract authorizing you to proceed. Before agreeing to changes in the scope of work, you should, once again, make it clear that you are entitled to additional fees because you are spending time on an item that was either completed in your original scope of work or on a new items not in your original agreement. If a dispute arises over such a matter in the future, a document signed by your client authorizing your additional work will carry far more weight than an oblique reference to it in meeting minutes.

Unauthorized design changes

Owners seem to have a habit of asking contractors to change exits, sprinkler systems, paths of egress, building occupancy types, and so on, with the hope that no one will notice. An owner's instructions to the contractor to alter the construction of the building from your design, which turns out to be unsatisfactory, may still be considered your responsibility unless your records show that you were aware of the change and did not recommend it. If your duties include site visits and you notice deviation from your plans, you should send written notice to the owner and contractor that any changes made to construction that do not comply with your plans or applicable codes are not your responsibility. If you don't, the cost of correcting any noncompliant construction, or liability for any personal injury or property damage resulting from it, may later be asserted as a claim against you. If you can show a record of communication that states your plans were not followed, this will go a long way toward protecting you from these claims. At the least, be sure to save a record set of plans and specs in case the question comes up in the future.

The changing of the guard

You can be in good standing with your client one day and out of favor the next if the person in charge of the project for the client, who understands your scope of work, leaves. When this occurs, to protect yourself, you must schedule an immediate meeting with the new individual running the project. Assume that you are starting over and that this person has absolutely no understanding of your duties and responsibilities or the history of the project. At this meeting, you will thoroughly review the scope of your work and the basis for your understanding of each aspect of your contract. Follow this up immediately with a detailed, letter of confirmation. If the new person is inexperienced or anxious, you must do whatever is necessary to develop a relationship of trust so that the project can go forward smoothly. This may be time-consuming, but it is cheaper than facing a malpractice lawsuit based on a gross misunderstanding of the architect's responsibilities. Of course, you should be reimbursed for the additional time spent in this

sm

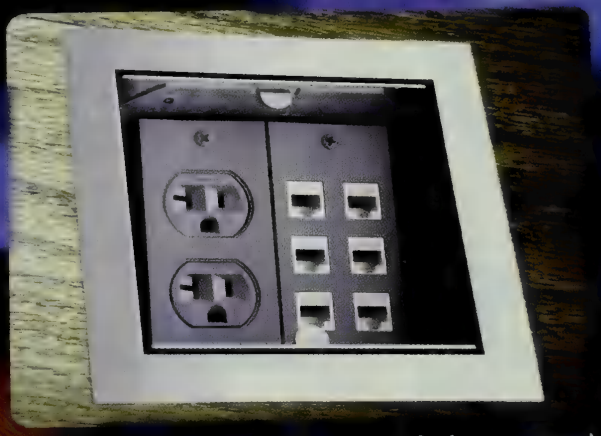
IDER MANUFACTURING INC.
N ISO 9002 REG. COMPANY

FUNCTIONAL ELEGANCE
BRINGING VOICE, DATA AND
ELECTRICAL CONNECTIONS
TO THE DESK AND
CONFERENCE TABLE



MARQUIS-3

ONCORD-3



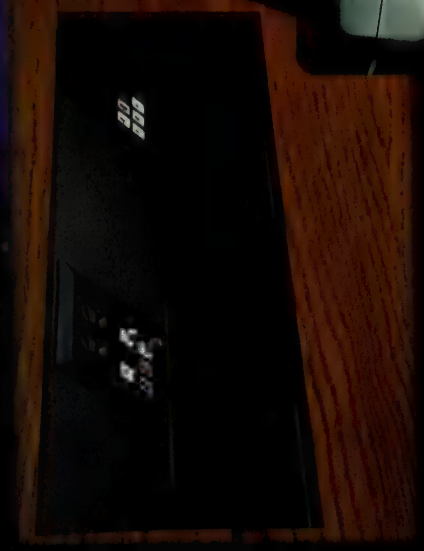
SHADOW-2 (covers open)



PHANTOM-4 (covers open)



PHANTOM-2 (cover open)



MIRAGE-4



MIRAGE-2

For a Complete Catalogue
Phone: (250) 765-2616
Fax: (250) 765-2614

Visit Our Website At
www.spidermfg.com
sales@spidermfg.com
CIRCLE 33 ON INQUIRY CARD

Spider Manufacturing Inc. #5 - 364 Lougheed Rd. Kelowna, B. C. Canada V1X 7R8

orientation and assistance process, and if you get off on the right foot, the new client representative will appreciate your help and agree to compensate you for it.

Practice fundamentals

The following tips are so easy to follow, they're often forgotten.

Time sheets. Employees consider keeping time sheets a hassle, but they enable you to keep meticulous records of all time spent on each project in the event that you must file a claim against the client to demonstrate your entitlement to unpaid fees. Distinguish between basic contract work, additional work on contract items, and extra work not included in your original contract. Perform no work beyond the scope of your contract without an authorization in writing, signed by the client. Your authorization should briefly and clearly explain why the work was required and what additional fees are due.

Get paid as you go. You have performed valuable services for your client and are entitled to get paid when the services have been performed. Make sure that you get paid for your work as it progresses, according to your contract. In your billing statements, be sure to distinguish between contract work and additional or extra work authorized by the owner. Your authorization form for extra work should provide for payment of your additional fee as the work progresses. You may also consider a provision in your contract for stopping work if payment is not received within a reasonable time limit and adding an interest penalty for late payments.

Promptly address problems. If trouble appears, stop and address it. If you are required to perform additional or extra work due to reasons beyond your control, whether they be contractor errors, unknown field conditions, or other matters, you must stop work and insist on an immediate meeting with the owner to address the situation. Of course, if you have done a good job explaining the scope of work to your client from the outset, it will come as no surprise that these unexpected circumstances require you to perform more work than you originally agreed to, and that you are entitled to receive additional compensation for handling them.

Know when to walk away. If the contractor messes up critical work, don't be afraid to stop the job and make sure that the responsibility for the problem is placed squarely where it belongs. If this creates extra burdens for you, have the owner sign an agreement that you will be paid additional fees immediately and that this will be taken as a credit on the contractor's progress payment. If the owner refuses to acknowledge and pay for additional design or field services or for your basic contact work, you may decline to continue as architect of record on the project. If you withdraw, you must act responsibly by providing timely and appropriate notice to all concerned parties and to the authorities. Bear in mind that your firm is legally responsible for any work you have done, and the same standard of professional care applies, regardless of whether it is in your contract and whether or not you get paid for it.

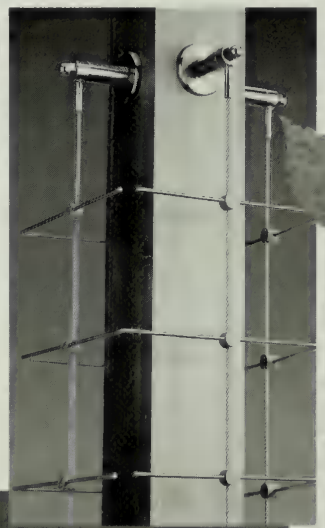
All of this correspondence, file keeping, and renegotiating for extra work probably seems more like busywork than design. But keeping your project files well organized and maintaining records of meetings and conversations will go a long way toward protecting your practice from claims, and it will help you to get paid.

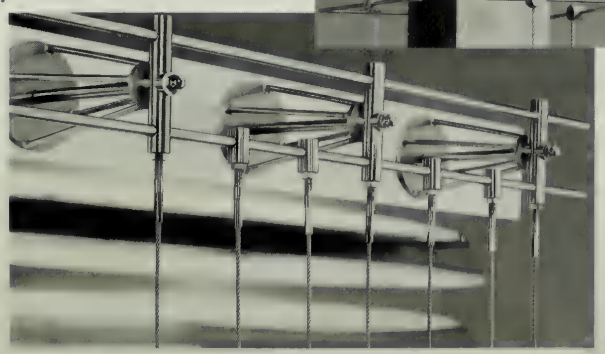
If you sense trouble brewing. A brief consultation with a qualified attorney may nip a problem in the bud before it results in a claim against you and the long, costly process of digging your way out of it. ■

Green Solutions

DecorCable Innovations is proud to introduce the new Jakob INOX LINE GreenSystem that is specifically designed for vertical plantscapes and outdoor greening projects.

Whether classic or avant-garde, our wire rope and connector products represent the state-of-the-art in all architectural styles. Ask for a copy of the Jakob INOX LINE G1 catalog.







DÉCOR CABLE INNOVATIONS

DécorCable Innovations, LLC
660 West Randolph St.
Chicago, IL 60661
Tel 312.474.1100
1-800.444.6271
Fax 312.474.1789
E-mail sales@decorcable.com
Website: www.decorcable.com

CIRCLE 34 ON INQUIRY CARD

OUR CERTIFICATION EXAM CAN MAKE EIGHT WEEKS

OF BOOT CAMP SEEM LIKE A SUMMER VACATION.



Each year, every Metal Building Manufacturers Association (MBMA) member must pass a thorough engineering and manufacturing audit that combines a written submission and on-site inspections by an independent consulting engineer.

Here's the drill. AISC auditors annually scrutinize order entry, purchasing, fabrication, and design and detail documents randomly selected from a list of 200 projects over the past six months.

In addition, they give the white glove treatment to our manufacturers' inner workings, from receiving to welding quality to shipping.

MBMA members also invest millions of dollars in research to advance the performance of metal buildings in extreme conditions.

No other industry group matches our members' dedication to bringing architects quality, flexible and dependable metal building and roofing systems.

To find out more about specifying metal buildings systems or our CEU programs, call or visit our web site today.

Recruits only go through boot camp once. Your metal buildings manufacturer has marching orders to take the exam every year.

MBMA
METAL MANUFACTURERS

CIRCLE 55 ON INQUIRY CARD

(216) 241-7333

www.mbma.com

Magellan Health Services Building, Columbia, Maryland

Designed by Douglas N. Carter, AIA, NCARB – Davis, Carter, Scott, Ltd.
Winner of ACI's 1999 Excellence in Concrete Award

Built with SLENDERWALL





Award Winning Architects Specify *SLENDERWALL*™

SLENDERWALL combines time-proven components to create a permanent lightweight wall system for new construction and renovation. Architectural precast concrete, insulated Nelson anchors, and heavy gauge steel studs create a single, efficient exterior wall system with unlimited design freedom.

SLENDERWALL is designed to reduce building foundation and structure costs, shipping and installation costs, and thermal transfer. The design isolates the exterior precast skin from the structural stresses associated with wind loading, steel framing movement, expansion and contraction, and seismic shock.





City Administration Building , New Brunswick, New Jersey

Designed by Edward Rothe, FAIA – Rothe-Johnson-Fantacone
Winner of AIA New Jersey 1999 Architectural Firm of the Year

Built with SLENDERWALL

Unlimited color, textures and finish combinations



SLENDERWALL™ is available throughout North America from selected architectural precasters through EASI-SET™ Industries, licensor of precast concrete products in seven countries.

Call for literature and design manual.

EASI-SET INDUSTRIES
Midland, VA 22728
(800) 547-4045

EASI-SET is a wholly-owned subsidiary of SMITH-MIDLAND Corporation, a publicly-traded company.

Sweet's Catalog 07415ESI www.easiset.com

CIRCLE 36 ON INQUIRY CARD

Aesthetics and the city

Robert A.M. Stern on Two Columbus Circle p.63
Michael Kwartler and New York City's zoning p.64
Suzannah Lessard on Portland's design review boards p.68

Critique

We should save Edward Durell Stone's maligned marble masterpiece in New York

By Robert A.M. Stern, FAIA

I'm well aware that some people think I'm out of my mind to want to preserve Two Columbus Circle. The former Huntington Hartford Gallery of Modern Art in New York City is unabashedly decorative, whimsical—one might even say zany. But Two Columbus Circle, designed by Edward Durell Stone in 1964, is without question a landmark. Even though many greeted it initially as kitsch or a bad joke, just as they greeted heaven only knows how many other genuinely provocative, iconoclastic works, Stone's gallery was and is now a serious, carefully articulated building. It is also a fine complement to its important and challenging site on the rotary on the southwest corner of Central Park.

But the white marble building is also confounding. It doesn't fit neatly into any stylistic category, constituting as it does a bold, original, and very early attempt to break with the Modernist aesthetic that held sway in the post–World War II era. With lessons learned from the past, Two Columbus Circle challenged the architectural culture of its era. And now its future is uncertain. The New York City Landmarks Preservation Commission has decided not to schedule landmark hearings, and the City's Economic Development Corporation is still sitting on 13 proposals submitted for the site. One, from the Dahesh Museum, which has a collection of 19th-century academic art, would clearly keep the gallery for its original use.

Let's not forget that Ed Stone was one of the most important and admired architects of his generation, one whose "brilliant future" had been predicted by Frank Lloyd Wright. Stone's building must be considered as important and valid as Eero Saarinen's contemporaneous TWA Terminal at JFK, now safely landmarked, and as the major buildings at Lincoln Center, now facing the threat and promise of a billion-dollar makeover. Lincoln Center also deserves to be protected.

Stone's pioneering work in International Style Modernism in the 1930s included the Museum of Modern Art, which he designed with Philip Goodwin, and the Mandel House in Mt. Kisco, N.Y. In the 1940s he produced a series of houses in the manner of Frank Lloyd Wright, but by the mid-1950s he saw clearly that postwar Modernism had become a straitjacket. Aesthetic freedom was in the air. Or, to use the phrase that Stone himself then employed in describing his break from Modernism's grip, "I'm going to bat for beauty."

Helped by a very supportive client, the A&P heir Huntington Hartford, the newly liberated Stone fled the aesthetic asylum with abandon, joyously attacking Modernism's fetishization of functionalism and its pseudo-scientific technological determinism. Stone's design mined architectural history—it was a Venetian-inspired palazzo rendered 10 stories tall and, according to the architect, also inspired by the Romanesque church of Saint-Germain-des-Prés. Whatever its sources, the building was clearly arresting—and delightful. It reinforced the geometry of the circle to which it was sensitively scaled. And, inside, it had some nice, small, wood-paneled galleries to display pictures.

Both Two Columbus Circle and the art collection that the building was built to house were squarely intended to counter what was then the Museum of Modern Art's ardently polemical bias toward a reductivist Modernism. What an irony that Stone had designed MoMA's 53rd Street building which, I might add, was until recently decried as not very good compared to its European precedents, but is now



Two Columbus Circle by Edward ("I'm going to bat for beauty") Durell Stone.

Robert A.M. Stern, FAIA, is dean of Yale University's School of Architecture and principal of Robert A.M. Stern Architects in New York.

properly being given kid-glove treatment by that institution's trustees.

It is precisely this exquisite irony that we must learn from. We must not allow ourselves to be seduced into aesthetic myopia based on the tastes of the moment, swayed by subjective definitions of beauty that are ever changing. Its worth would be obvious to many, if real-estate considerations and egos were put aside in favor of civic values.

The main issue here about the building's preservation is not the fact of its landmark quality—it's a question of its aesthetics and, dare I say, taste? Where would our High Victorian landmark architecture be today if it were preserved on the basis of prevailing taste? Is a building considered banal and kitsch really bad? Can we not be mature enough to acknowledge the varieties and vagaries of taste? Is beauty *only* a product of style wars—or is it a victim? Some argue that Two Columbus Circle is too idiosyncratic a building to deserve to be preserved. Yet think of today's most admired buildings: so many of them are also idiosyncratic, to say the least, leaning, swooping, and blobbing about as they challenge our preconceived notions of beauty. Will these bold protests against yesterday's aesthetic last only a generation and be pulled down because they no longer conform to the prevailing ideology?

We must take the long view, and not give in to the changing winds of architectural fashion and the tendency to eliminate as we smugly revile the recent past. Two Columbus Circle must be preserved for future generations to consider, debate, learn from, and, heaven help us, actually enjoy. There must be room in architecture for witty commentary and for irreverence. As the design editor Olga Gueft so aptly put it in 1965: Stone's design was one that "only a Bauhaus ogre with hardened arteries could fail to smile at." So I say, "smile and save." ■



Trump World Tower, to the right of the United Nations

New zoning proposed for New York needs further refinement

By Michael Kwartler, FAIA

New York City has been the leading laboratory for zoning experimentation ever since it was the first municipality to develop comprehensive zoning regulations in 1916. A current proposal to revamp its zoning regulations has implications for the larger design and planning community. Included is a controversial idea to provide incentives for aesthetics or good design. As the following essay indicates, the problem may be not just in the goals, but in the process as well.—Ed.

In 1961 the new zoning laws unabashedly embraced the Modernist, utopian view of the city by introducing two innovative concepts, incentive zoning and density limits (based on the ratio between floor area and site size), along with the ubiquitous tower-in-the-park model. Over the next 40 years, New York City continued to experiment, for example, by encouraging public amenites and contextual zoning. Notwithstanding these efforts, the tower-in-the-park and contextual zoning came into conflict. It was time to reconceptualize New York's zoning into a coherent and consistent set of regulations. The result is the Unified Bulk Program, slated to be voted on by the City Planning Commission in early November.

Michael Kwartler, FAIA, is the director of the Environmental Simulation Center and principal of Michael Kwartler and Associates.

The Unified Bulk Program finally puts to bed the 1961 tower-in-the-park zoning 38 years after Jane Jacobs' wrote *The Death and Life of Great American Cities.* Formulated by New York's Department of City Planning and endorsed by its director, Joseph Rose (also the chair of the planning commission), the proposal replaces the Corbusian vision of the city with a consistent set of contextual zoning regulations that involve height limitations, new building configurations, and a dispensation on aesthetic grounds (which is being modified as we write).

As part of this approach, heights of buildings would be limited in all residential, commercial, and manufacturing sections of the city, with the exception of midtown and lower Manhattan. One of the apparent problems with the 1961 regulations was that there were virtually no limits to the building height per se, a loophole that allowed Donald Trump to erect a 861-foot-high residential tower designed by Costas Kondylis & Associates on First Avenue near the United Nations. So the city is proposing that a lid be clamped on buildings from 50 to 360 feet in residential areas, and 90 to 720 feet in commercial ones, depending on the location.

A second, related feature of the new proposal is replacing tower-in-a-park regulations with tower-on-a-base ones that would fill out the site to the street wall. Much of this contextual zoning would be as-of-right, that is, not approved by a special review process. This aspect is commendable in that the policy would recognize that the city is a heterogeneous mosaic of distinctive neighborhoods and unique districts, and zoning should reinforce the sense of place rather than homogenize it.

The third major feature, which is the most unusual and much-discussed change in the zoning legislation, has proved to be controversial. To compensate for the rigidities in the new zoning, the city would allow exceptions based on aesthetics (a.k.a. "good design"), originally to be determined on a case-by-case basis by a design advisory panel. While the status of this panel remains in doubt, it is likely that some form of waiver would remain, based on urban design criteria rather than a building's architectural aesthetics.

Rose is right to rethink this third feature in the new zoning. While the instinct is correct, the approach is wrongheaded. If the intent is to use zoning as one tool to promote good design, shouldn't the Unified Bulk Program's "as-of-right" regulations be designed to meet that objective, since 99 percent of all new buildings will be built as-of-right? The reality is that only limited, if any, use would be made of the design special permit, since it would

Timely gives unfinished hollow metal door frames the brush-off.



Why pay $25-$50 more per opening?
Stop painting the old fashioned way and start specifying
Timely Prefinished Steel Door Frames for your projects!

TIMELY®
PREFINISHED STEEL DOOR FRAMES

10241 NORRIS AVE. ▪ PACOIMA, CALIFORNIA 91331-2292
(818) 492-3500 ▪ (800) 247-6242 ▪ FAX (818) 492-3533
9782 INTEROCEAN DRIVE, CINCINNATI, OHIO 45246
(513) 682-9600 ▪ (800) 346-4395 • FAX (513) 682-4102
Visit us on the internet at http://www.TimelyFrames.com

CIRCLE 37 ON INQUIRY CARD

take at least 18 months to get approved, would be costly, and would be fraught with uncertainty.

Putting the procedural issues aside, should the city or the public determine what is acceptable architectural design on a case-by-case basis? Isn't it better to represent the public's interest by designing a set of regulations that frame the problem to be solved and the means to assess performance? Architecture and urban design are not the same thing. Urban design is an inclusive and open system that has meanings for the public at large. Architecture is, and must be, much more subject to individual interpretation—hence it remains an exclusive, closed system. The 1980s Midtown Zoning Regulations illustrate this point: they allowed Christian de Portzamparc's LVMH Tower to sit next to Platt Byard Dovell's Chanel Building. Both respond differently to the same set of regulations, yet they were built as-of-right with no design review.

It is not in the public interest to substitute my architectural aesthetic values for another's: with design review it is unlikely that the Guggenheim and Whitney museums would have penetrated the good manners of Fifth and Madison Avenues.

The real problem with the Unified Bulk Program, as it was with its 1961 predecessor, is that the zoning is based entirely on prescriptive zoning, as opposed to performance zoning. Prescriptive zoning assumes that one knows in advance what is appropriate for every lot, block, neighborhood, and district in New York City, not only for today, but also for the next 10 to 20 years. If there is a virtue in prescription, it is its predictability and perceived simplicity. By legislating a building type, prescriptive zoning rejects the idea that there may be multiple right answers to a design problem, that all of them are acceptable, depending on the time and the social, economic, and physical context.

But predictability comes at a price. For example, the rigidly prescriptive 1961 zoning regulations typically made innovation difficult, if not impossible, because the site plan and building form were overdetermined and predetermined. The same is true for the contextual Unified Bulk Program regulations, resulting from the interplay of minimum and maximum building base height-and-setback restrictions, building-height limits, lot coverage, and yard regulations. Essentially, the one-size-fits-all tower-in-the-park plan is to be replaced by its antithesis, the one-size-fits-all contextual-building-type plan.

Yet much of the city's most innovative and admired housing, such as First Houses in Manhattan and Sunnyside Gardens and Phipps Houses in Queens, or various landmarked mews in New York, could not be built as designed under the Unified Bulk Program. While they may adopt the perimeter-block concept (a.k.a. "contextual"), they do not fit Unified Bulk Program's ordained building forms and inflexible standards.

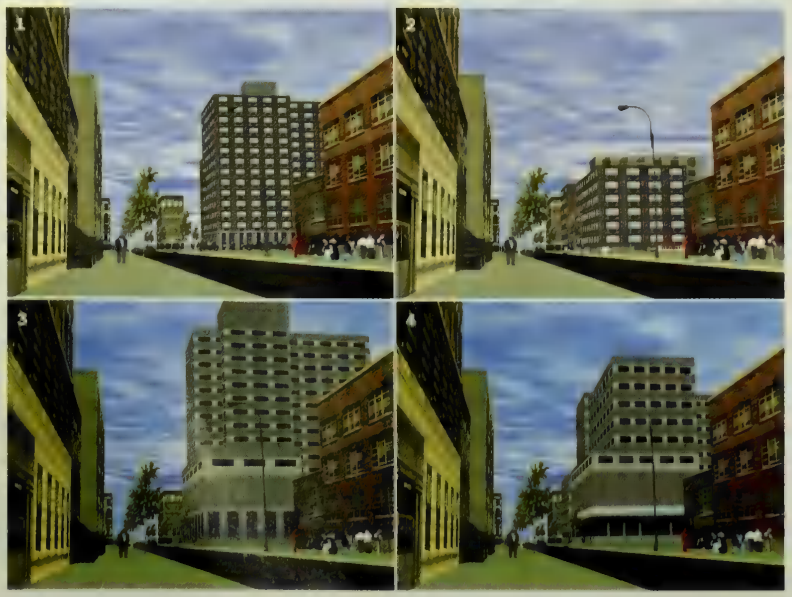
The form, content, and practice of land-use regulations were once thought immutable, locked in the static world of traditional zoning, sustained by the Supreme Court in 1926 in *Euclid vs. Ambler.* But this is not the 1920s. We are only beginning to grasp the ramifications that globalization and information technology will have on the spatial distribution of activities in the city and the forms they will take. We could not anticipate the unlikely prospect of people wanting to live in old manufacturing loft buildings; new types of households; and the emerging implications of the digital revolution on work and place. We need a more responsive system of land-use controls, one that would not have a backlog of regulations that take years to adopt and are typically outmoded by the time they are adopted.

Let us consider an alternative that dispenses with zoning as we know it, embraces uncertainty, and moves from static regulation to dynamic management. A management-based regulatory system is one that would be capable of responding to changing conditions, profit from experience, be self-adapting, and be administered as-of-right.

Such a system would tap the power of Geographic Information Systems (GIS). This analytical digital tool contains spatial data, such as infrastructure, blocks, lots, building footprints, heights, uses, etc., integrating information about a place with its physical form. The results would be displayed in a fully interactive 3-D model (3-D/GIS) of the neighborhood, moving zoning out of the abstraction of words, numbers, and diagrams, into the real world. The process integrates performance standards and a continual evaluation through information and feedback.

The exercise of choice constitutes the basic mystery, and sometimes the poetry, of how places are shaped. Consequently performance standards present a system of trade-offs among real world choices, where decisions are made according to the specific site and context of the neighborhood. Throughout the process, management concepts would be used to assess anticipated developments in relation to a community's articulated sense of its future, and its capacity to support it. With continual information and feedback, one could adjust goals and measure performance periodically.

The proposed move from static regulation to dynamic management would actively merge planning and zoning. The world has changed substantially since zoning was first created in NYC in 1916 and mandated a constitutional use of the police power. It is more complex and global in scope, with change accelerating, and uncertainty not just a fact of life but something that should be embraced. ■



If the Unified Bulk Program is passed, the building configurations would change as seen in these studies (1 & 3, before, 2 & 4 after). Views are from West 112th St. toward Frederick Douglass Blvd.: a residential building (top) and community/school facility (bottom). While the minimized bulk is appealing, the means for attaining this goal should be more sophisticated.



A fire is never good news. But if it results in significant downtime, it's worse. Which is why you need DuPont FE-36™ in your portable extinguishers. It leaves absolutely no residue, which makes for less clean-up and greater uptime. Its low toxicity is good news for users and its lack of ozone-depleting properties is good for everyone. And FE-36™ is globally available and universally effective on every kind of fire, making it the best clean-agent extinguishant, anytime, anywhere. For more information, call 1-800-473-7790 or visit our website, www.dupont.com/fire.

DUPONT®

DuPont Fire Extinguishants

CIRCLE 38 ON INQUIRY CARD

Copyright © 2000 E.I. du Pont de Nemours and Company. All rights reserved.

Portland's review process shows there is room for a quiet kind of beauty

By Suzannah Lessard

I was surprised when I recently found myself in Portland, Oregon—a progressive place, in my mind, and far from the seductions of old Europe—in the company of two hip, intellectually vigorous, and entrepreneurially successful young architects, Nancy Robertson and Candice Merryman, who were openly passionate about beauty. The subject came up because their firm was one of the many that have worked with the design review process governing all building projects in downtown Portland, as well as other city neighborhoods electing to have design guidelines.

I had asked them if they felt any Modernist ambivalence about submitting to a process that in a certain way institutionalized beauty. With the unguarded fervor that can come at the end of a long, hard day, they were off, quickly moving far beyond the comparatively humdrum realm of design review. They were talking about big-time beauty, the real thing.

One of them, for example, spoke of encountering beauty for the first time by deeply understanding the universal truth of a mathematical formula. That kind of beauty, the kind that seduces absolutely, enslaves. Their only acknowledgment of the very existence of Modernist ambivalence on the subject was that they assumed I didn't know what they were talking about. I have to say, hearing them sent pleasurable shivers down my spine, while at the same time I was scratching my head.

Beauty is not, on the whole, a force that invites you to question its power, which is perhaps why the Modernists were so uncompromising in their rejection of it. Though design review cannot possibly legislate beauty in the larger sense, the establishment of a design review process is one of the ways that the idea of beauty has crept back into respectability in architectural culture, through the side door of planning, it has to be said. Furthermore, the goal of design review in Portland, as in other places, has as much to do with what you don't see—with the prevention of ugliness—as it does with what you do see, a kind of recessive approach that has also allowed the ideal to sneak in under the radar of architectural discourse.

Most advocates of design review do not claim to be trying to achieve beauty, exactly, but rather to be trying "to build a decent city decently" as Jeff Joslin, a planner with the city, put it to me. Still, design review implies certain principles that might be able to hide behind the idea of "a humanistic scale" or the wish to avoid the more alienating aspects of Modernism, or the more senseless expressions of capitalism. But in the end, it cannot really be justified without in some way, in some guise, affirming the ideal of beauty. The truth is that architects have been going for beauty for years. Still, on the East Coast the word itself is still not quite respectable and is even embarrassing, so that the whole notion has been in the closet in a certain way.

Not so in Portland. Though few were as forthright as Merryman and Robertson, I found no architect at all conflicted in a philosophical sense about beauty. Though they surprised me, Merryman's and Robertson's feelings at the same time seemed inevitable. Of course, I thought, beauty has to come back, and now is about the right time, historically speaking. It's an instinct, a capacity that is synonymous with our humanity.

Listening to them, I also wondered, "Are those hard-earned 20th-century insights—the nefarious, seductive, misleading qualities of beauty—to be forgotten? Isn't there any wisdom in the suspicion of beauty?" Walking around downtown Portland with such thoughts in mind, I sought out buildings that I knew reflected the design review process. An office building, downtown apartment buildings with shops on the first floor, a building for the Port Authority—they were all attractive.

In general, downtown Portland is lovely, charming, and congenial. There are few blank walls at street level, and the breaks at the level of the first story keep the experience of the sidewalk comfortably within a human scale. The corners are interesting and lead you rather than blind you, all features explained in the design review guidelines. The older buildings have been well restored, and the newer buildings have facades that are full of interest for the eye, where often a variety of textures, colors, and shapes are coherently deployed. They create a rich, intelligible visual experience, also encouraged by design review. The onlooker feels acknowledged and respected by these buildings in which such care has been taken to please.

One of the reasons that the Modernists were suspicious of beauty was because it was used to justify, mythologize, and ennoble corrupt political and social systems, as well as religious institutions. The kind of beauty that knocks you flat on your back in awe can make you believe anything. Such is not the beauty in downtown Portland. It is a modest beauty that is content to stay in the background as a mere impression, enhancing the life that goes on around it. Still, it is a seduction of a kind. It ennobles and justifies something.

But I found that if I chose to look at it more directly, if I asked, "What's going on here? Whom does this beauty serve and what is the truth underneath?" the answers were far more straightforward than is often the case where traditional forms of beauty are concerned.



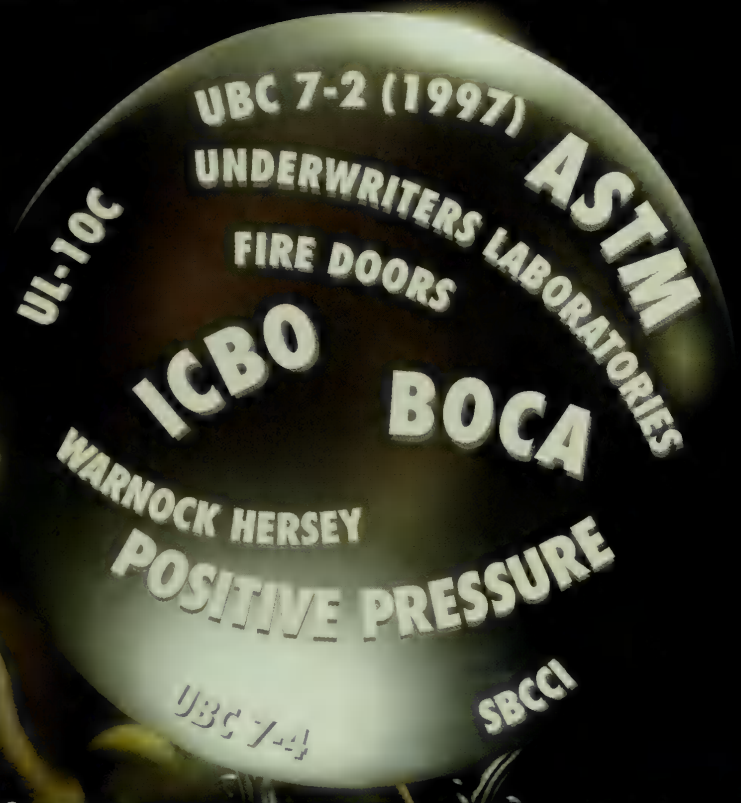


The exterior walls with "leak" windows (top) and transparent entry (bottom) were pedestrian amenities implemented in the design of Portland's Chinese Garden, by Robertson, Merriman, Barnes Architects.

Suzannah Lessard, author of The Architect of Design: Beauty and Danger in the Stanford White Family, *is working on a book about sprawl.*

STEEL DOOR AND FRAME QUESTIONS?

YOU DON'T NEED A CRYSTAL BALL TO GET THE RIGHT ANSWERS.



Contact someone you can trust.

CECO'S ARCHITECTURAL ANSWER LINE

1-888-CECO DOOR

(1-888-232-6366)

Ceco Door Products
A United Dominion Company

Proving our leadership . . . everyday.

750 Old Hickory Boulevard • One Brentwood Commons, Suite 150 • Brentwood, TN 37027 • (615) 661-5030; FAX (615) 370-5299 • www.cecodoor.com

CIRCLE 39 ON INQUIRY CARD

The purpose of the beauty of an apartment building in downtown Portland is not to trumpet the importance of the people who live there at the secret expense of those who don't. It is to make the experience of downtown Portland more pleasant for the community at large.

The purpose of the beauty of the Port Authority building is not to make me think that the government of Portland is great and powerful—as beautiful 19th-century government buildings often do—but to enhance the environment for me and for you: it is, if anything, a form of the government serving the public.

Beauty in downtown Portland is a civic choice that can be truly appreciated only when compared to what we know would be there if design review guidelines did not exist: a haphazard decaying environment, wasteful, depressing, and flaunting a societal disregard for the public realm.

The beauty of downtown Portland, in other words, reflects a decision to reverse the normal course of events in America. The result may be a modest, middlebrow beauty in many respects, middle-class in its postures and even complacent in its style. But in the context of American history, it stands for a quiet revolution of a kind. And in that revolution, it represents a perfect inversion of the old Modernist problem. Choice, after all, is the essence of morality. The beauty of downtown Portland, the deep beauty, is in the statement of conscience and responsibility that it represents.

This is the perfect answer to the Modernists. Still, the question arises, can it be sustained? Can this muted, almost self-effacing form of inspiration generate beauty that will rival the great architecture of the past?







Design guidelines include orienting residential development to the sidewalk (top); enhancing downtown view corridors (top, right); and articulating urban edges (right, below).

The category of building that has brought forth the most stunningly beautiful architectural designs in recent years is the museum of art. So it is not God, the king, or even democracy that inspires the highest form of beauty today, but the ideal of art—that is, beauty itself. Design Review Board beauty, in its more modest way, is similarly inspired. We make an effort to have more beautiful cities because they are more—beautiful. ■

Add to the unique character of your homes



An Elevette®
provides luxury and practical convenience for upscale home owners. That's why today's designers provide space in their plans for this residential elevator. The custom-built Elevette is available in many configurations and interior finish options. It fits easily into new construction or renovations.

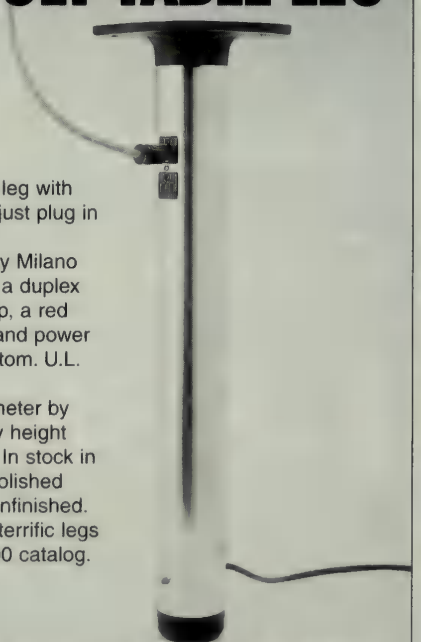
For more information refer to: Sweet's 2000 General Building & Renovation File 14235/IND.

INCLINATOR COMPANY OF AMERICA

For free literature, call toll-free **1-800-343-9007**
or write: Dept. 66, PO Box 1557, Harrisburg, PA 17105-1557
fax: 717-234-0941 ▪ e-mail: isales@inclinator.com ▪ www.inclinator.com

CIRCLE 40 ON INQUIRY CARD

110 VOLT TABLE LEG



The only table leg with power built in; just plug in and go!

To our trendy Milano Leg we added a duplex outlet at the top, a red indicator light and power cord at the bottom. U.L. Listed.

It's 3¼" diameter by 27" overall; any height can be made. In stock in Matte Black, Polished Chrome and Unfinished.

Many other terrific legs in our new 2000 catalog.

Doug Mockett & Company, Inc.
"Fine Architectural Hardware for Your Fine Furniture"®
Box 3333 ▪ Manhattan Beach, CA 90266 USA
Tel: 310-318-2491 • FAX: 310-376-7650
Visit us on the Internet at www.mockett.com

CIRCLE 41 ON INQUIRY CARD


OWENS
RNING
Tune In.
SelectSound® Sound Quality System
Theater-quality sound is a major asset in today's custom homes. And the Owens Corning SelectSound Sound Quality System is designed to provide it. Elegant, acoustically engineered wall panels absorb and reflect sound as needed—allowing you to "tune" any room for optimum acoustic performance. It's one smart part of our total acoustic solution.
THE NEXT WAVE IN HOMES IS CUSTOM ACOUSTICS.
Tune Out.
QuietZone® Noise Control System
Working. Sleeping. Escaping. Whatever the reason, more customers are asking for dedicated "quiet zones" within their homes. Owens Corning's integrated QuietZone Noise Control System absorbs, blocks and isolates undesirable noises, turning any room into an oasis of peace and tranquility. It's one smart part of our total acoustic solution.
For more information, visit our website at www.owenscorning.com or call 1-800-GET-PINK
OWENS CORNING WORLD HEADQUARTERS
ONE OWENS CORNING PARKWAY
TOLEDO, [illegible] 43659
CIRCLE 42 ON INQUIRY CARD

FOLLANSBEE® ENVIROMETALS®

TCS II® and TERNE II®









versatile roofing metals coated with a new environmentally-friendly alloy

FOLLANSBEE®

FOLLANSBEE STEEL • FOLLANSBEE, WV 26037
Call us toll-free 1-800-624-6906

CIRCLE 43 ON INQUIRY CARD

Visit us on the Webette
follansbeeroofing.com

Our E-Mail address:
follrfg@lbcorp.com

Snapshot



By Naomi Pollock, AIA

Big in Japan: The inflatable "Pika Pika Pretzel" wall

In Tokyo, where a cacophony of neon signs, multistoried video screens, and supergraphics rule the road, few buildings stand out. So when international developer Veloqx City Investment Ltd. asked Klein Dytham to design a temporary construction fence for their first project in Japan, the Tokyo-based architects knew they had to come up with something outrageous. Fighting fire with fire, they created Pika Pika Pretzel, a dazzling, silver 112-foot-long inflatable wall that brilliantly focused attention on the site even before ground was broken.

Part blockade and part billboard, the fence consisted of two parts: a standard-issue steel panel wall covered with not-so-standard silver and sticky-backed plastic, and four 30-foot-high "pika pika" (Japanese for "bright and shiny") pretzel-shaped pieces made of the 0.04-inch-thick fabric used for hot-air balloons. "We thought it was a really interesting material," says Dytham. "I am fascinated by giving structure to fabric by putting air into it." The fence fronted a choice site on Omotesando, Tokyo's answer to the Champs-Elysées, from





The appropriately named Pika Pika Pretzel (the word means "bright and shiny" in Japanese) wall is made up of 30-foot-high pretzel-shaped pieces. The pieces are made of .04-inch-thick fabric used for hot-air balloons.

November 1999 through May 2000, when it was taken down to make room for site excavation for the 12,558-square-foot retail center, designed by CDI Aoyama Studio and scheduled to open autumn 2001.

Right from the start the architects envisioned a huge air-filled wall on the site. But to alleviate enormous wind loads, the wall, shaped like a beach raft on its side, had to be poked with holes—a decisive move that ended up molding its overall form. While the holes strengthened the 3½-foot-thick wall by tying its two surfaces together with translucent white fabric, they required elaborate internal ribs to preserve a rectilinear shape. But by rounding the top profile around the holes instead, the entire hoarding could be sustained by air pressure alone. Four 6-inch-diameter metal poles that tethered each pretzel-shaped balloon to an existing concrete slab at grade kept them from blowing away, and two 150-watt fans kept each one inflated round-the-clock.

Like Klein and Dytham, who came from England and set up shop in Tokyo in 1991, Pika Pika Pretzel was a British import. Manufactured by Cameron Balloons, the maker of 90 percent of the world's hot-air balloons, the fence took a month to fabricate in the company's Bristol factory. It was then sent by airfreight to Japan in four discrete boxes. Gale force winds slowed installation but, all told, it took no more than a day for Taisei Construction Company to put the pretzels in place, thanks in part to tea and sympathy from the manufacturer's local representative. ■

owlett 2001: The Legacy of CRS

Conference and CRS Reunion Presented by CRS Center

FAIA, **de la REZA**	**NEUBEK**, *AIA*
FAIA, **DeBARTOLO**	**PARSHALL**, *FAIA*
FAIA, **HOOVER**	**PEÑA**, *FAIA*
FAIA, **LAWRENCE**	**WATERS**
FAIA, **LAWYER**	**COOKE**, *AIA*
FASLA, **MAY**	**EIMER**
FAIA, **KOLLAER**	**LOFLAND**
FAIA, **THOMSEN**	**MURPH**, *PE*
AIA, **DEAN**	**SCARANO**, *AIA*
FAIA, **GATTON**	**STRANG**, *PE*
AIA, **GRIFFIN**	**WHITCOMB**
FAIA, **SKAGGS**	**BULLOCK SR.**, *FAIA*
FAIA, **STANSFELD**	**PASEUR**, *FAIA*
WILLIAMS	**WILKINSON**
FAIA, **CHERRY**	**LACY**
FAIA, **FOCKE**	**ANDERSON**
FONSECA	**BAILEY**, *FAIA*

Please call 979-847-9357

http://rowlett.tamu.edu/



February 16 2001

CIRCLE 44 ON INQUIRY CARD

x a s A & M U n i v e r s i t y , C R S C e n t e

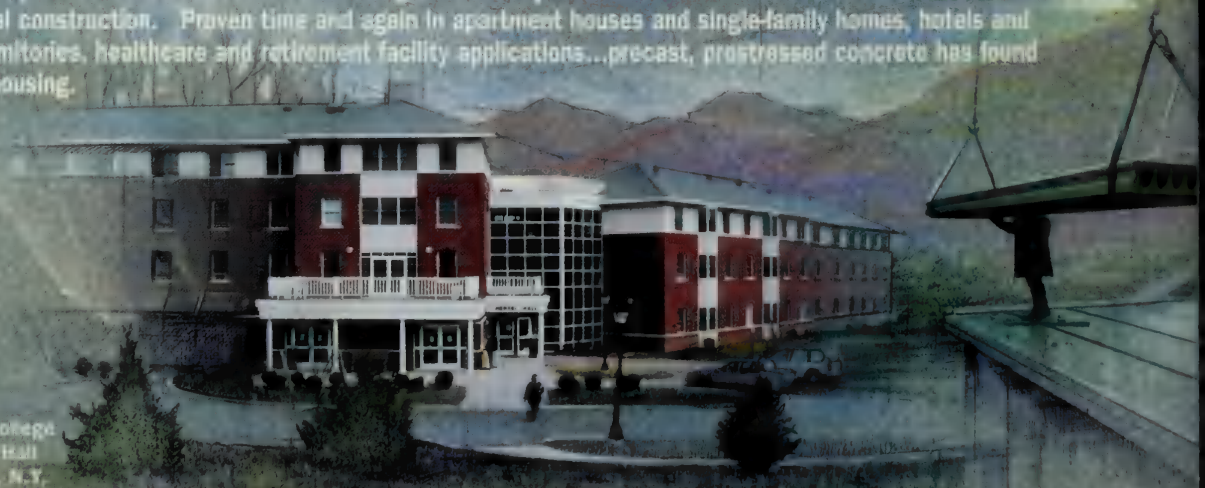
Oh, the Housing



Kingsboro Towers
Gloversville, N.Y.
Leonard Feldman

Fairmont Hotel
San Jose, Calif.
HOK San Francisco

...of precast, prestressed concrete. It's the design community's most versatile material, both in structural and architectural construction. Proven time and again in apartment houses and single-family homes, hotels and motels, dormitories, healthcare and retirement facility applications...precast, prestressed concrete has found a home in housing.



Dominican College
Residence Hall
Orangeburg, N.Y.
Einhorn Yaffee Prescott P.C (EYP)

1-800-947-8800 · www.pci.org

Design Possibilities...



Scattered-Site Housing
Chicago, Ill.
Piekarz Associates P.C.
Architects

East 111th & 112th Street
Partnership Homes
New York, N.Y.
Dattolo Architect

UHL STUDIOS

To learn more on how precast, prestressed concrete applications can meet your needs in housing design, call 800-947-8800 and ask for a FREE copy of our 16-page informative brochure.

The Precast/Prestressed Concrete Institute is the international association of certified producers, professionals and suppliers to the industry. PCI, an American Institute of Architects Registered Provider, works closely with architects in delivering tomorrow's reality from today's dreams.

Precast Concrete...Your Design Option!

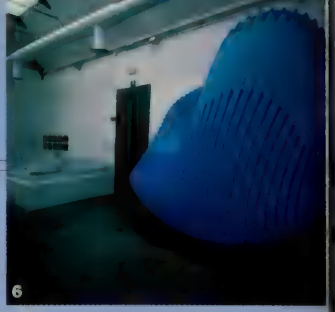
pci

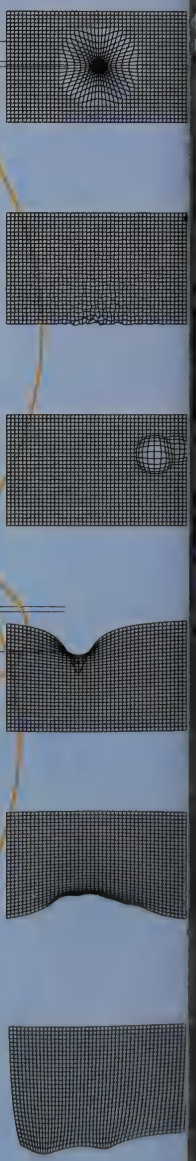
PRECAST/PRESTRESSED CONCRETE INSTITUTE

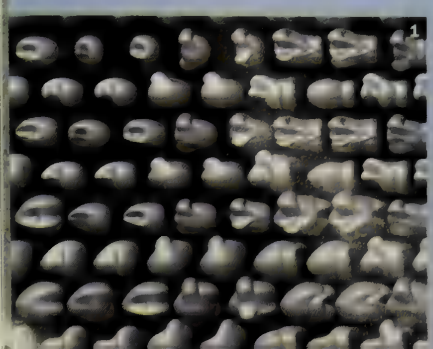
209 West Jackson Boulevard
Chicago, IL 60606
E-Mail: info@pci.org

CIRCLE 45 ON INQUIRY CARD

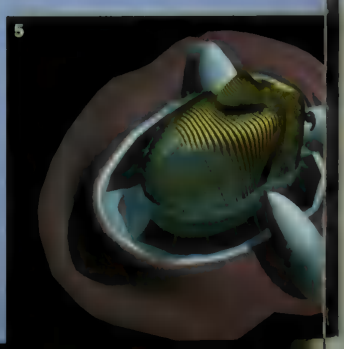
Greg Lynn's Embryological House was developed through various phases of digital design (below and opposite), resulting in the construction of a mill-made model (right) at the Venice Biennale 2000.











By Ann Bergren

The Easier Beauty of Animate Form

Greg Lynn's recent projects, the Embryological House and the Korean Presbyterian Church, challenge our assumptions about aesthetics

Is beauty difficult? Gazing at the gorgeous bodies roller-blading along the boardwalk here in Venice, Calif., beauty may seem the best and easiest thing in the world. From this coast, that other Venice—where the recent Biennale in its theme of "The City: Less Aesthetics, More Ethics" [SEPTEMBER 2000, page 71] implied a conflict between beauty and good—may seem more than a world away. But in the work made in his office here and presented in the show there, Greg Lynn transcends the distance between these two points of view.

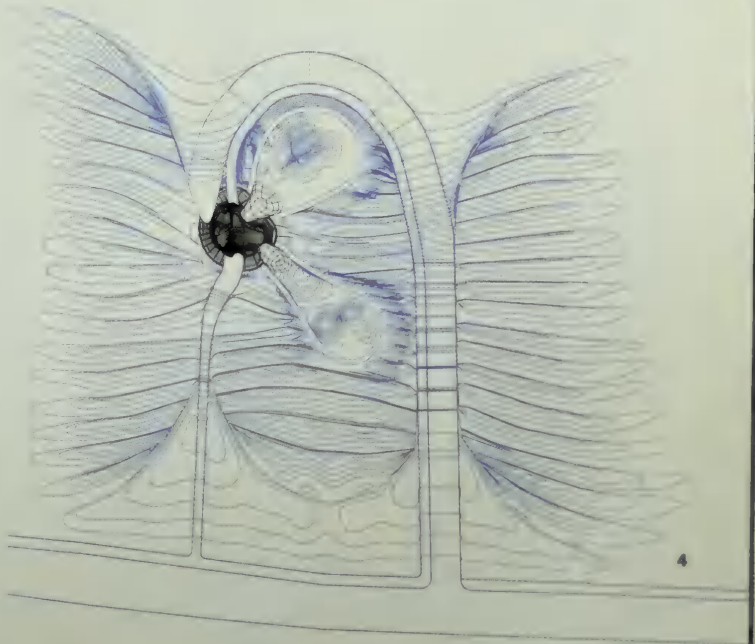
An opposition between the beautiful and the good is as classical as the identification of the two. For while philosophy and theology have insisted traditionally upon the ultimate unity of beauty, goodness, and truth, other discourses on the human condition, ones that specialize in money and sex—like poetry, tragedy, or economics, for example—have never been so sure, repeatedly characterizing beauty as diabolically ambivalent.

Exciting the full force of eros, beauty revives the will to live. By promising the complete range of erotic pleasure, from sexual satisfaction to cultural creation, beauty produces a virtually irresistible drive to possess (thus eliciting the counteracting claim made by philosophers such as Kant that "true" beauty is universal and "disinterested"). But the distribution of beauty is unequal. Being an external, material, and formal condition, it is an unreliable index of inner, invisible truth. And just because it is so irresistibly pleasurable, it clouds the mind. Dazzled and seduced, who can remember that "beauty is only skin-deep?"

Frequently, attempts to cope with beauty's ambiguity repeat its zero-sum economy of profit and loss. An aesthetic conservative would magnify its value, but concede its inequality by limiting beauty to enhancing the life, increasing the pleasure, and proving the worth of a chosen few. A more egalitarian approach would attack beauty's rarity by reducing its value and extent—"less aesthetics, more ethics." Two recent projects of *Animate Form* (the title of Greg Lynn's 1999 book)—the Embryological House [DECEMBER 1999, page 104], which appeared in the Biennale, and the Korean-American New York Presbyterian Church—pursue a different strategy.

Each of these projects implies a certain critique of architectural aesthetics. The most difficult thing about architectural beauty, says the Embryological House, is that there is not enough of it—it's too time-consuming to design in quantity, too difficult to build, too expensive for many to buy, and so it tends to rewrite economic disparity as lack of aesthetic class. And sometimes, suggests the Korean Church, it's solipsistic, uninterested in other building or programmatic signification, wanting only to be a "knockout" by itself. In tackling these causes of difficulty, the two projects of Animate Form try to make architectural beauty easier.

Ann Bergren lives in Venice, Calif. She received an MArch from Harvard Graduate School of Design and frequently writes about architecture.



Embryological House

Embryological House explores the potential of CAD/CAM to offer a mass market a new maximum of aesthetic value. The goal is a "line" of houses that would transcend the alternatives of Modern industrial production—if mass-produced and thus relatively inexpensive, then standardized; if one-of-a-kind custom design, then available to relatively few. Design and manufacture by aid of the computer present a different economy of constraints and options. Within the outer limits of a common structural system and the parameters of the manufacturing machine, the design process of Embryological House gives the architect and client a virtually unlimited range of choice. Each phase of the design is "interactive," presenting a series from which a selection must be made. By this choice the entire form is modified, as opposed to development or "kit-of-parts" housing in which alternatives affect only parts of the whole. In animate form-making, the products are at once multiple and unique.

The Embryological House develops in a series of animations. First, a set of vectoral forces is applied to a primitive shape and permitted to generate a group of what Lynn calls "gastrulated rooms" (an analogy with the biomorphogenetic process by which an embryo folds on to itself to form a gaster, or "stomach"). (1)

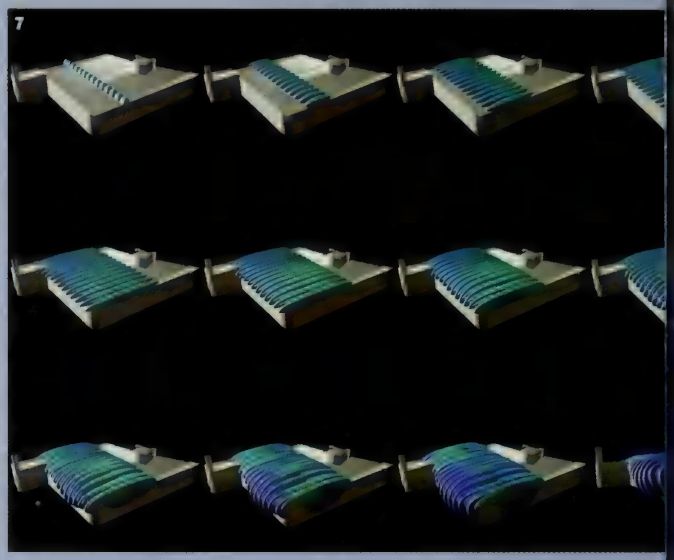
From these Lynn chooses the six showing the widest variation and invents a structural system that can accommodate them all. The six volumes are then developed through interaction with forces applied to an arbitrary ground plane: while deforming the volume, the ground also deforms, nesting the volume in a folded plinth. (2)

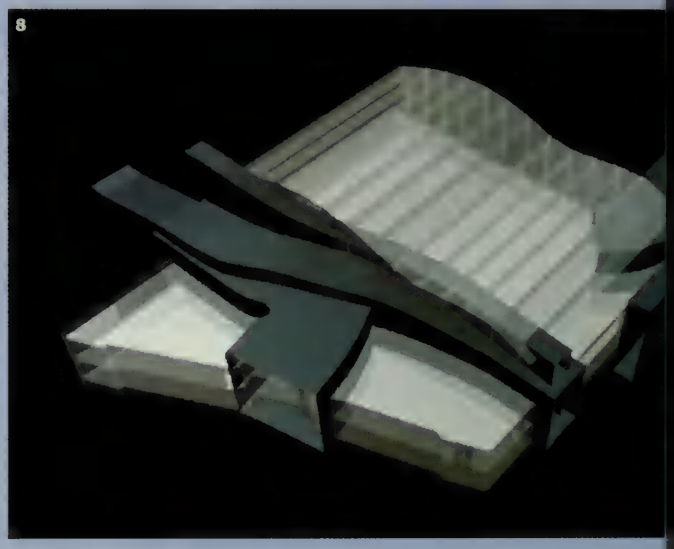
The house volumes can now be brought under the influence of a particular site. To provide local conditions for the houses, Lynn chose the sites of 12 Palladian villas in the Veneto and translated the particularities of each—topology, orientation, barrier, and access—all into vectoral information. (3) When one of these sites interacts with one of the nested house volumes, mutual deformation results in the creation of an interstitial zone for transitional amenities such as grotto, garden, or patio, which can be rendered in glass so the ground turns transparent and the house appears floating above it. (4)

EACH OF THE PROJECTS IMPLIES A CERTAIN BUT SEPARATE CRITIQUE OF ARCHITECTURAL AESTHETICS.

At any stage of the process, other kinds of information can be permitted to influence the form. In one house, for example, the path of the sun on a given day (it could be any date of a client's choice) is translated into forces that subtly deform the surface. As the sun passes around the solar vault, it registers the areas of light and shade along the building's irregular dents, leaving patterns like moss on rocks. The zones where the sun shines on the south side are lifted slightly from the surface, as if magnetized by the solar arc. They are turned paradoxically into shade panels of three-dimensional light, or so it seems, made from golden ribbons of photovoltaics bonded between urethane and flexible stainless-steel sheets.(5)

At the end of this embryology appears a series of unique houses of a generic proportion, 30 feet high (2½ stories), 30 feet wide, 50 feet long, that can swell or shrink, depending upon the site. Computer-aided manufacture makes the houses an aesthetic bargain by producing within its parameters the series' multiple, singular units without specialized machining and in relatively little time. At the Venice Biennale, Lynn illustrated this means of production through a 30 percent scale model made with 5-axis (three orthogonal plus clockwise and counter-clockwise) CNC (computer numerically controlled) milling machine.(6) From a gantry arm moving back a forth within a 30-by-20-by 6-foot range, first thicker, then thinner drill bits milled the form from 3.2-foot-thick slices in less than a week. As a mode of distribution, Lynn envisions a kind of "mail-order" business that could deliver these house-parts to any site on the globe.

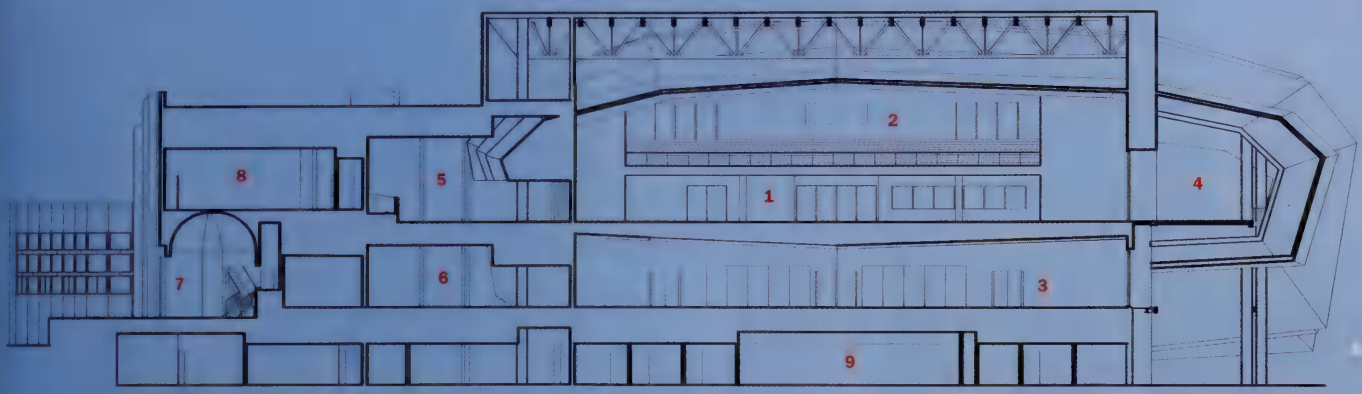

7

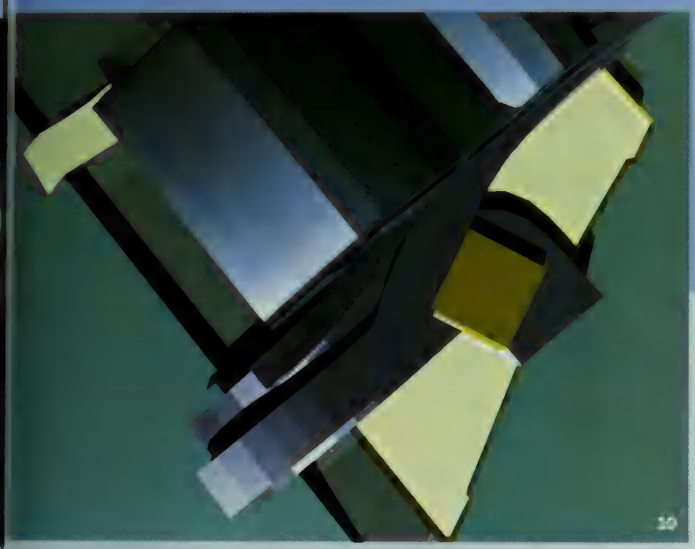

8

The New York Presbyterian Church

Blob building would seem the very essence of the future, a complete break from the past: its forms diverge so strikingly from those of earlier architecture, both Classical and Modern; it is designed and manufactured by aid of the most advanced technology, and it aspires to transcend traditional aesthetic and ethical alternatives. If any architectural beauty is going to be self-centered, therefore, unconcerned with anything not itself, Animate Form itself might seem the most likely suspect. Because the new has so often defined itself as that which can and must obliterate the old, such suspected exclusivity is understandable, but dangerous. It can breed resentment, if not fear, of these new forms. It can make this beauty difficult to take. Yet in the case of Animate Form, such suspicion is unwarranted. For radical innovation is only half of this beauty's story, or rather, its radicality resides in a new function of the new.

Making old the kind of new that would wipe out the old, it is





1. *Main sanctuary*
2. *Sanctuary balcony*
3. *Cafeteria*
4. *Outdoor stair*
5. *Sanctuary lobby*
6. *Cafeteria and chapel lobby*
7. *Secondary entry*
8. *Members meeting room*
9. *Classroom level*

The Korean-American New York Presbyterian Church in Queens was completed in 1999 by Lynn, with Douglas Garofalo and Michael McInturf. The renovation and addition to a 1930s laundry (southeast elevation, right) resulted from digitally designing an egglike blob that is morphed into a sanctuary and terrace, and irregularly bent circulation tubes that project through three sides as large rectangular windows.



the beauty of the Korean Presbyterian Church to animate tradition. As presented to the trio of architects—Douglas Garofalo, Greg Lynn, and Michael McInturf—for conversion into a 2,500-seat church, the building was a graffiti-poxed ghost of the 1930s Knickerbocker Laundry Factory, a two-story industrial shed greeting riders of the Long Island Railroad with a classically bisymmetrical, streamlined Moderne facade. It was originally criticized by Lewis Mumford for a "misplaced monumentality." To reno-

THE CHURCH ANIMATES TRADITION, BOTH ARCHITECTURAL AND RELIGIOUS.

vate the building, the architects made two major moves–an egglike blob on top of the existing building that generates the sanctuary and terrace (7) and a circulation of curving tubes. (8)

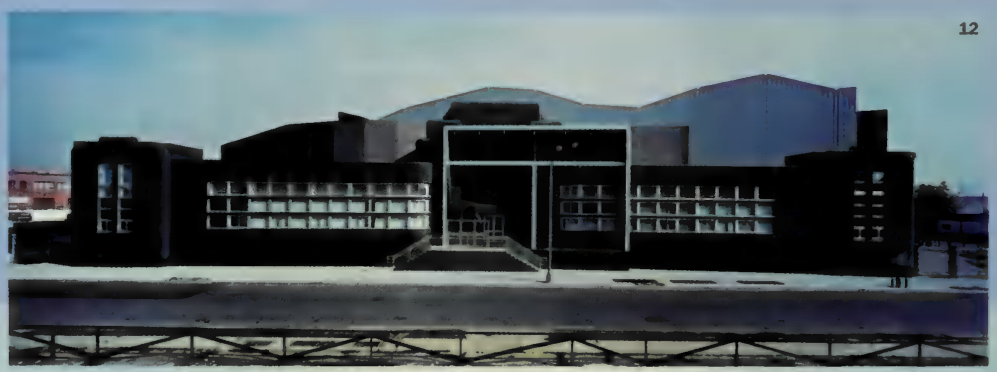
Each of these additions works to produce not univocal symbols, but rather a symbolic potential—forms that interact in this context as virtually animating puns that bring to life the building's traditions, both architectural and religious. While manifesting in plan and section the irregular sinuosity of spline curves, the tubes of the "interior subway" thrust through the skin on three sides of the building to end in giant glazed rectangles, tributes in their cruciform mullions to the building's Modernist framework as well as to its current religious use. Standing beside and projecting ahead of a similarly glazed entrance, the crosses signal east and west, "the way, the truth, and the life." (9) On the south side, the tube turns to revive the monumental facade. (10)

Embracing within its bend the octagonal, domed foyer, (11) the curve ends in a rectangle again, but this time cut into two squares, placed to quicken the moribund symmetry of the windows and steps. (12) With one square framing the entrance, the other plants a vertical line that subtracts three from what now read as three rows of 11 and 7 windows, two numbers whose numinous force in many sacred traditions (being indivisible by either two or three) might not come to mind here, were it not for the numerological play on the church's opposite side.

The morphological derivative of the original egg, the north elevation (13) of the sanctuary and terrace functions as a sort of "title line" for Animate Form. From left to right, the roof rises and falls in two waves, the first of three and the second of twice three panels, itself echoed in the six metal fins, as they move like the key—frames in the animation process, each opening toward the view of Manhattan beyond. Coupled with the three projecting crosses at the end of the circulation corridors and divided in threes by three architects in a building devoted to the Trinity, the form here animates the anima itself, the "soul" expanding as it breathes.

In the deployment of their aesthetic resources, the Embryological House and the Korean Presbyterian Church show that Animate Form is more than a pretty new face. Taken together, the house and the church display the range of what good architectural beauty can do. Coupling the two most ancient and elemental of architectural programs, this house of the future and this church, where East joins West, call for a beauty that reaches beyond its immediate "time zone." Such a beauty does not try to cancel the past and thus set itself up to be cancelled in turn, but allies to itself traditional forms and symbols in an ever-widening distribution of its revitalizing assets. ■

12



13



The Korean-American New York Presbyterian Church (south elevation, left) has a roof that rises and falls like a wave, (reflected on the interior of the 2,500-seat sanctuary) and six metal projecting fins (north elevation below) that open to the view.

SPECMATE™ CENTER SPINE CABLE TRAY

Perimeter | Overhead | Inflоor | Open Space | Structured Cabling



"What's up with this?

Stuck way up here. Out of sight, out of mind. I guess to them, I'm some sort of glorified rafter, keepin' wires and cables out of their hazelnut lattes. Well, guess where their shiny computers get power. e-mail...mp3 files? That's right – from me...and a wire and cable infrastructure that delivers power and communications wherever these cyber surfers need it. And those big technology breakthroughs they're developing? We're ready for them. So in ten...twenty...fifty years, we'll still be here. And those computers down there? **Well, they'll make pretty cool doorstops."**

WIREMOLD

www.wiremold.com

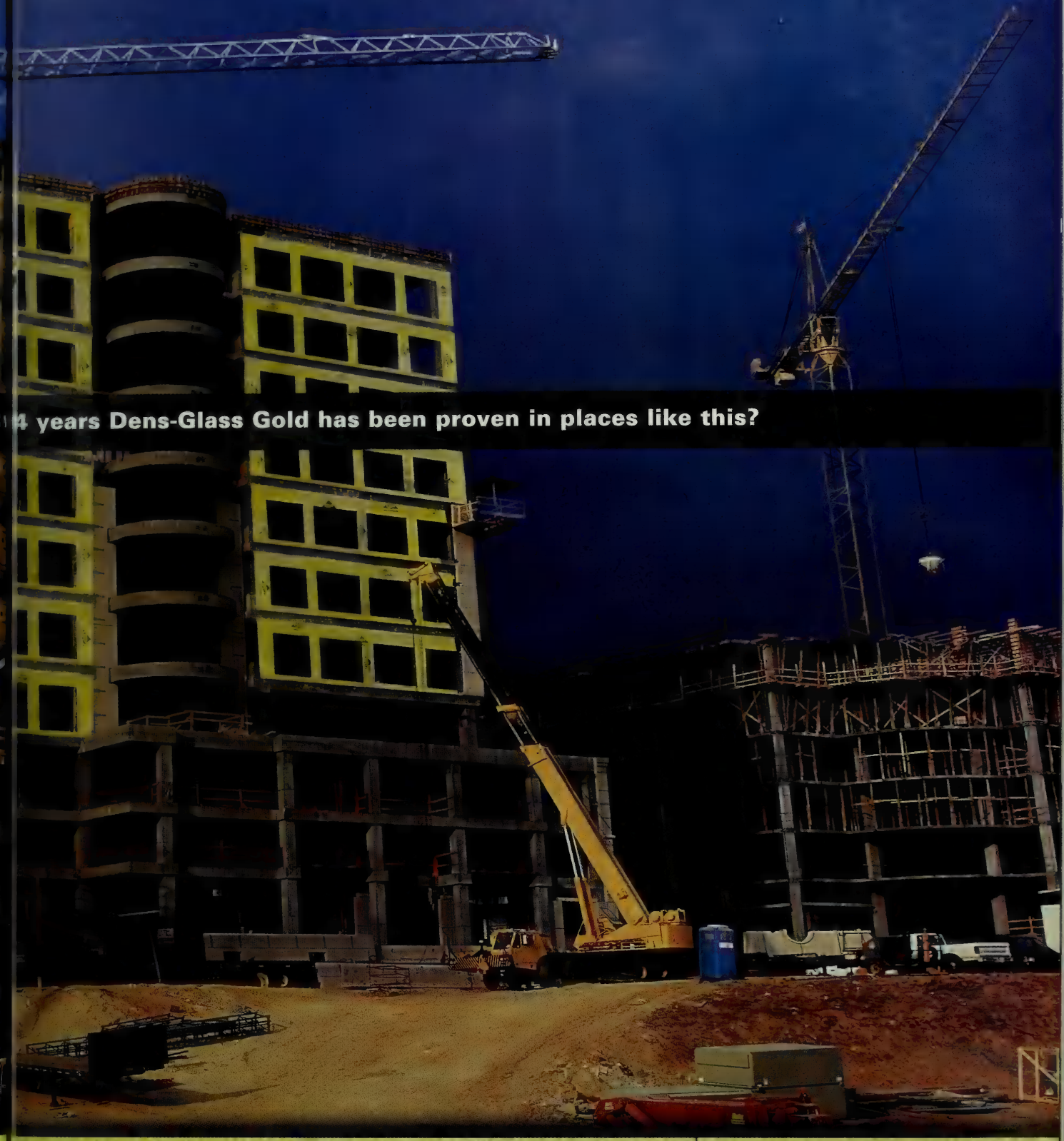
CIRCLE 48 ON INQUIRY CARD



Why would you use any other exterior sheathing product v



With Dens-Glass® Gold, there's absolutely no reason to risk your reputation on any other exterior sheathing product. Simply put, Dens-Glass Gold, f
G-P Gypsum Corporation, is superior in every way. It has a 10-year substrate warranty provided on commercial EIFS projects, it's non-combust
and ASTM 136 compliant. And not only has Dens-Glass Gold maintained optimum performance for over 14 years, it's been proven 99.999% defect



4 years Dens-Glass Gold has been proven in places like this?

ourse there's also the fact that Dens-Glass Gold is lightweight and easy to cut with a utility
e. So next time you find yourself wondering which exterior sheathing product would best suit
needs, think about the options. Then think Dens-Glass Gold. Proven. Reliable. And simply superior.

GP
Georgia-Pacific

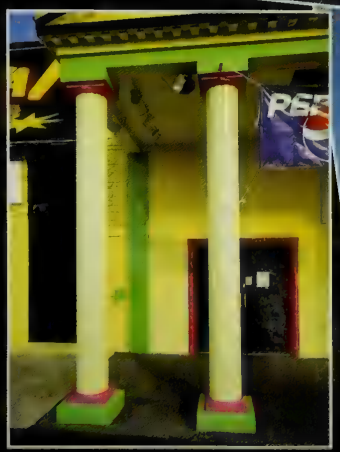
CIRCLE 47 ON INQUIRY CARD

Wish you were here

By Charles Linn, AIA

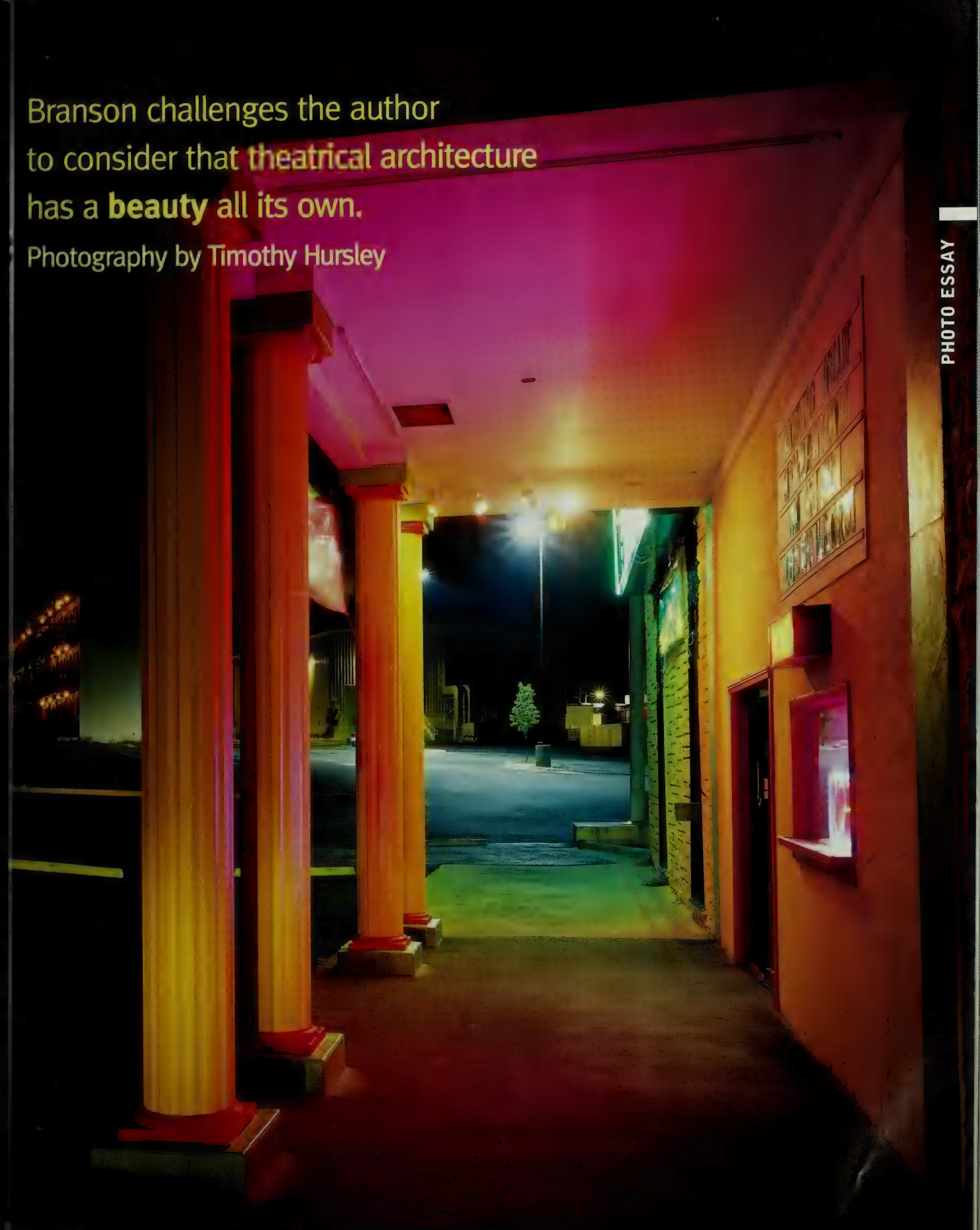
Branson, a town of 3,706, is located in the southwest corner of Missouri. Its biggest draw is 49 theaters, strung out along Highway 76 like jukeboxes, each carrying only the discs of its celebrity owner. The Osmonds (sans Donny), Bobby Vinton, Andy Williams, Jim Stafford, Japanese bluegrass fiddler Shoji Tabuchi, and a few dozen others all have joints here. I was one of Branson's seven million visitors last year and must say the buildings there made me quite ambivalent. On the one hand, I felt I should hate them because many of their facades are really very corny caricatures of temples, Art Deco movie theaters, and Southern mansions, constructed of studs covered with exterior-finished insulation and bolted to the fronts of prefab buildings. On the other hand, I liked them because they resemble the people who own and perform in them: fun-loving and unselfconscious, and without a trace of pretense. While these places may have false fronts, they seem honest in their intent, which is, it seems to me, to capture the hearts and imaginations of a lot of people who wouldn't really be more dazzled were these buildings marble rather than metal. Well, you can't be a star without understanding what the people want and giving it to them. And in what was perhaps a triumph of truth over taste, I came away with affection for this place. I recommend a visit for anyone who is tortured by a love-hate relationship with the architecture of popular culture. ■







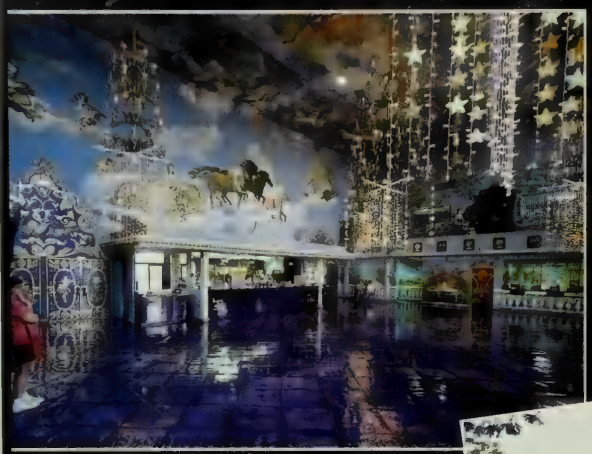
The Shoji Tabuchi Theatre (above), home of the Japanese fiddler Shoji, mimics grand movie-palace forms, while the Magical Palace (left) and Gotcha Laser Tag (far left and opposite) borrow elements from Islamic and Greek temples.



Branson challenges the author to consider that theatrical architecture has a **beauty** all its own.

Photography by Timothy Hursley

Some of the sights in Branson: The Hollywood Wax Museum (opposite) bears the likenesses of John Wayne, Elvis, Marilyn, and Charlie Chaplin. Below, from top down: the lobby of the Bobby Vinton Theatre; a meditation garden at the Shepherd of the Hills Homestead; the Grand Mansion; and the Moe Bandy Theatre.














MOTEL

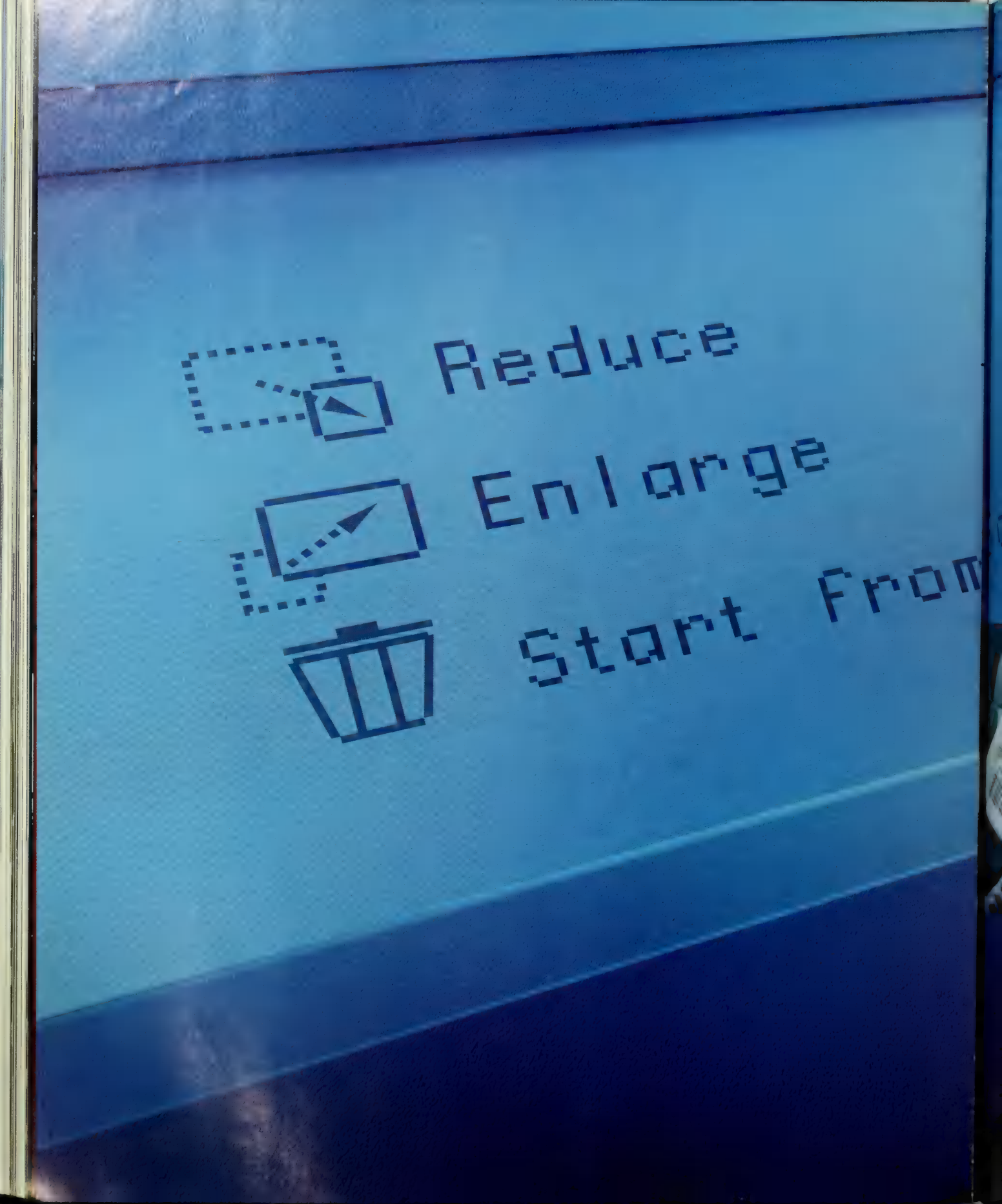
Could a Branson motel's swimming pool have been inspired by Morris Lapidus' Fontainebleau (opposite)? Below, top to bottom: Jimmy's Piano Lounge; the exterior and interior of the Waltzing Waters Theatre, where pianist Frederick plays the classics against a 40,000-gallon spectacle of water and light.



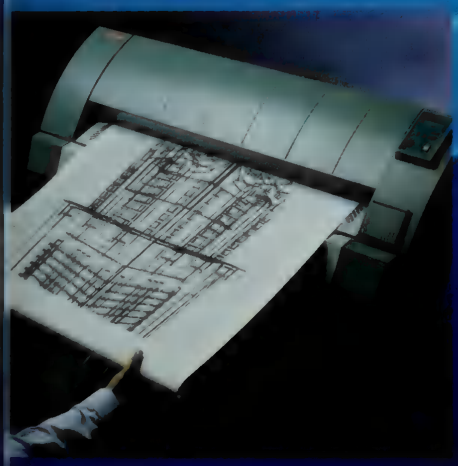







Reduce
Enlarge
Start From





Print changes almost as fast as your client can make them.

You've got a 20-story building and the client just made 25 changes. Enter Kinko's A to E prints. They're available in a variety of paper stock, including bond and vellum, and output at up to 300 DPI quickly and easily by top-of-the-line printers. They can be printed while you wait, or picked up and delivered within 24 hours. So you can get back to doing what you do best: designing, redesigning and designing again.

PRINT FROM DISK

DIGITAL PRINTING

COMPUTER WORKSTATIONS

ELECTRONIC FILE SUBMISSION

MOUNTING

LAMINATING

BINDING

MANUALS & REPORTS

PRESENTATIONS

HIGH-VOLUME COPIES

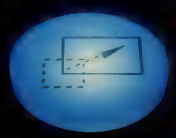
FLYERS & BROCHURES

HIGH-SPEED INTERNET ACCESS

SHIPPING SERVICES

PICKUP & DELIVERY

FULL- & SELF-SERVE



LARGE FORMAT PRINTING

kinko's

www.kinkos.com Open 24 hours

CIRCLE 48 ON INQUIRY CARD

Products and services vary by location. All marks appearing are proprietary marks of Kinko's Ventures, Inc. and are used by permission. Kinko's requires written permission from the copyright owner in order to reproduce any copyrighted work. ©2000 Kinko's, Inc. All rights reserved.

Fashion begins at home



Ceramic Tiles of Italy

CIRCLE 49 ON INQUIRY CARD

For more information, please contact: Italian Trade Commission - Ceramic Tile Department 499 Park Avenue - New York, NY 10022 - tel. 212 9801500 - fax 212 7581050 - www.italtrade.com - newyork@newyork.ice.it - www.ceram

Ceramic Tiles of Italy, promoted by Assopiastrelle (Association of Italian Ceramic Tile and Refractory Manufacturers), is a registered trademark of Ed.Cer S.p.a., the organizer of CERSAIE, the world's largest International Exhibition of Ceramics for the Building Industry and Bathroom Furnishings, Bologna, Italy, October 2 - 7, 2001.

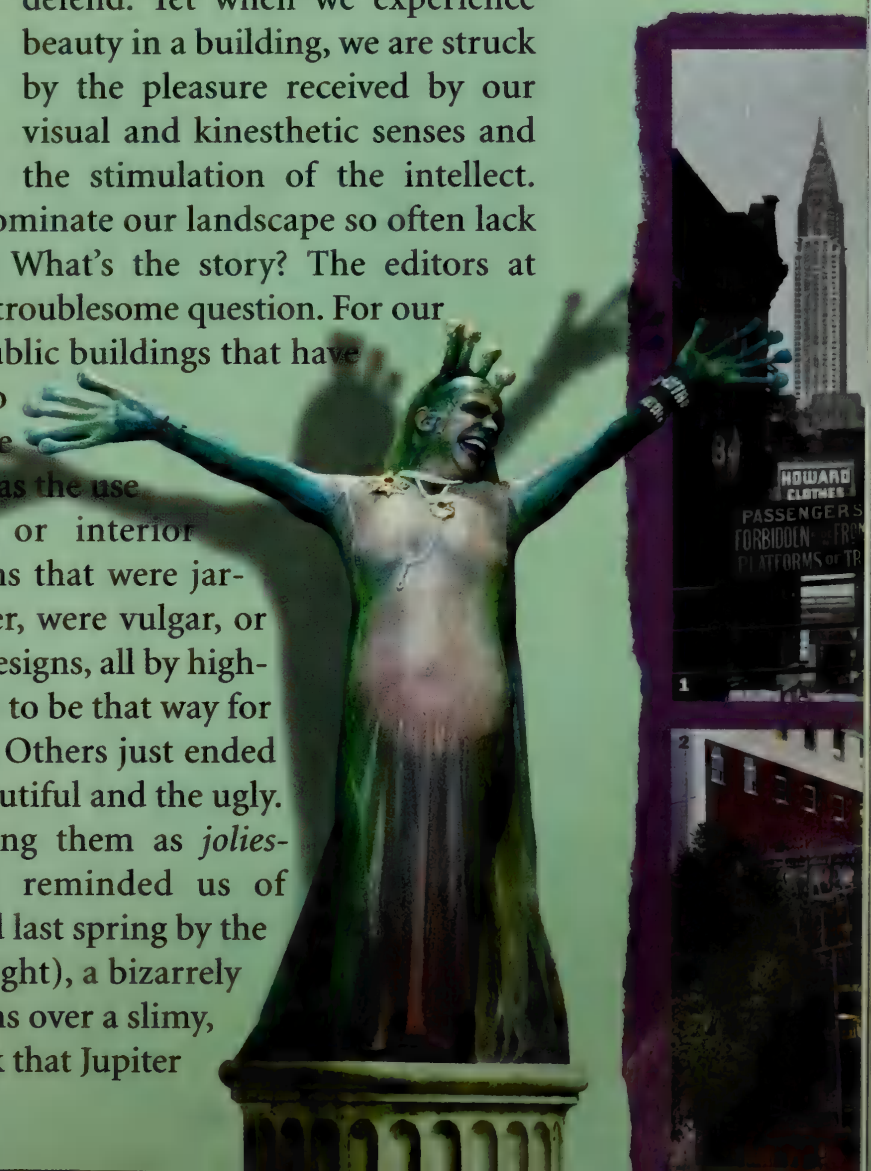
The Difficulty of Beauty

Faced with the surfeit of images resulting from a global economic expansion and new forms of media, how can we talk about beauty?

By Suzanne Stephens

It's so difficult to come by, difficult to judge, and difficult to defend. Yet when we experience beauty in a building, we are struck by the pleasure received by our visual and kinesthetic senses and the stimulation of the intellect. Unfortunately, buildings that dominate our landscape so often lack beauty, however it is defined. What's the story? The editors at RECORD decided to explore this troublesome question. For our investigation we selected five public buildings that have seemingly beautiful—and not so beautiful—features. In each one we found much to admire, such as the use of materials, craftsmanship, or interior spaces. But we also found forms that were jarringly or abrasively put together, were vulgar, or even sentimental. Some of the designs, all by high-profile architects, were intended to be that way for aesthetically polemical reasons. Others just ended up as curious hybrids of the beautiful and the ugly.

Our reactions, from seeing them as *jolies-laides*, as the French put it, reminded us of Rameau's opera *Platée,* mounted last spring by the New York City Opera. Platée (right), a bizarrely zaftig swamp creature who reigns over a slimy, green underworld, is led to think that Jupiter



finds her so ravishing he is going to ditch Juno. It turns out to be a cruel joke. Nevertheless, the costumes by Isaac Mizrahi, the direction and choreography by Mark Morris, and the singing and flipping around by Jean-Paul Fouchécourt in the grande-dame role, make Platée captivating. If she isn't pretty, her sincere aspiration to be in the company of the gods makes her endearing, even human.

So, are these buildings simply architectural Platées? Maybe. Some of them may look better to our eyes as time goes by; others will not. One, (Leon Krier's town hall in Windsor) seems almost too conventionally pretty. If they are venerated eventually, they have a lot of company: There is a long history of buildings initially dismissed on aesthetic grounds, but resuscitated over time. Because of his idiosyncratic Baroque architecture, Francesco Borromini was criticized by his contemporary, the writer Giovanni Bellori, as "a complete ignoramus, the corrupter of architecture, the shame of our century." John Vanbrugh's early-18th-century Blenheim Palace was panned for its unclassical Elizabethan corner towers, and his work reviled by his influential client, the Duchess of Marlborough.

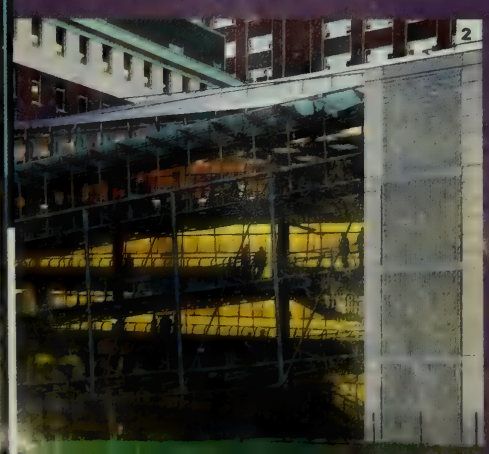
THE ROSTER OF BUILDINGS DISMISSED ON AESTHETIC GROUNDS BUT RESUSCITATED OVER TIME IS INTRIGUING.

Other buildings were judged harshly in their time as well: The works of Frank Furness and his followers in Philadelphia were too contrived and too awkward for critics in RECORD a hundred or so years ago. In 1889 artists, architects, and writers, including Charles Garnier and Guy de Maupassant, called the Eiffel Tower "useless and monstrous." Frank Lloyd Wright's Larkin Building in Buffalo was deemed "ugly" by eminent critic Russell Sturgis in RECORD in 1908, and in 1959 his Guggenheim Museum was dismissed by visionary architect Frederick Kiesler.

In 1931 Lewis Mumford charged that New York's Chrysler Building by William Van Alen was full of "inane romanticism" and "void symbolism," while Douglas Haskell felt Howe and Lescaze's International Style PSFS Building of 1932 was just a "filing cabinet." Paul Rudolph's Art and Architecture building was subjected to a functional (and by implication, aesthetic) critique by Ellen Perry Berkeley four years after it opened in 1963. Venturi's Guild House rattled the cages of the architectural world in the mid-1960s, and Morris Lapidus' Miami hotels were called kitsch by Ada Louise Huxtable. Bruce Goff, the organic mid- century architect, created work such as a Hopewell Baptist Church that even his biographer, historian David De Long, thought was "unresolved" and characterized by a "coarseness of detailing." Will Michael Graves' 1983 Portland Building—along with recent work by Eric Moss, Bernard



1


2


3


4


5


6


7

Tschumi, Michael Hopkins, and Frank Gehry, which have received criticism (even in these pages)—be subject to a revised perspective as time goes by? We will have to wait.

Some of these well-known examples epitomize avant-garde architecture. The standard explanation for the flak such buildings receive is that they are unfamiliar. Still, even though the inventive work of architecture may strike a raw nerve or challenges our perceptions and intellect, once we get used to it, we begin to see its beauty. By this adjustment of the eye, our aesthetic boundaries are expanded. For this reason, typically experimental design, whether by Daniel Libeskind, Peter Eisenman, or Coop Himmelblau, gradually becomes less difficult to love and admire. Not all avant-garde design is such a challenge, argues Ann Bergren [page 78]. She maintains that the digitally generated design in Greg Lynn's recent projects is both spectacularly innovative and "easy."

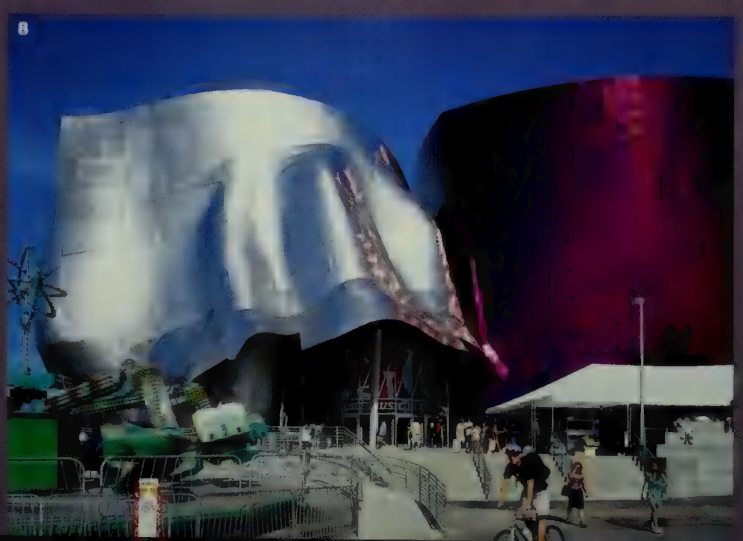
In the following case studies of "difficult beauty," we did not seek out avant-garde designs; in fact, the forms, design elements, and spaces of these five projects are typically familiar. While arguably of their time, they are not going to make waves: Any problems we had with them could not be attributed to the newness of their forms or their remoteness from things we know. Ironically, by taking more mainstream buildings, we could investigate the nature of aesthetic evaluation. Which brings us to the old objectivity-versus-subjectivity argument that has plagued aesthetic philosophy for the last 250 to 300 years.

It was easier back when we just accepted standards of beauty as objective, universal qualities that were inherent in an artifact and could be created or attained with the right kind of rhythm and proportions. But from the late 17th century on, as we learned more about our own senses and the psychology of perception, we had to account for the subjective nature of evaluation. The aesthetic object could have intrinsic qualities, but the experience of them shifted with an individual's perception. In judging beauty, we remained split between our reason's desire for objectivity and our emotional (subjective) need for feeling. Developments in scientific thinking, reinforced by empiricist and positivist philosophies, only increased our awareness of beauty's elusive subject-object duality, especially since beauty couldn't be proven scientifically. Needless to say, architecture—half-science, half-art—has been buffeted by these developments.









Any number of now historic landmarks were taken to task by critics on aesthetic grounds when they were first built. Some recent buildings have been criticized, but it is too soon to tell if they will be lionized over time. 1. Chrysler Building, New York City, William Van Alen, 1929. 2. Lerner Hall, Columbia University, New York City, Bernard Tschumi/Gruzen Samton, 1999. 3. San Carlo alle Quattro Fontane, Rome, Francesco Borromini, 1642. 4. Pennsylvania Academy of the Fine Arts, Philadelphia, Frank Furness, 1873. 5. Eiffel Tower, Paris, Gustave Eiffel, 1889. 6. Public Services Building, Portland, Ore., Michael Graves, 1983. 7. Guild House, Philadelphia, Robert Venturi (with Cope and Lippincott) 1963. 8. Experience Music Project, Seattle, Frank O. Gehry, 2000. 9. Uvida Cabin, Big Cedar, Calif., Eric Owen Moss, 1999.

The shame of beauty

The early-20th-century Modernist insisted that beauty was intrinsically tied to function or the well-solved problem: Beauty was a byproduct of function or, as in the case with Wright, a natural result of an organic process. It was not something valued for itself alone. Meanwhile, in the art world during that period, the Dadaists, as philosopher Arthur Danto pointed out in the catalogue for the Hirshhorn Museum's 1999 exhibition *Regarding Beauty,* were insisting that "beauty is not a necessary condition for art."

In recent decades, the Postmodern turn toward historicizing architecture, in a quest for meaning and beauty through familiar and easy-to-like styles, has been castigated for pandering to the masses and

THE DISTRUST OF BEAUTY LINGERS. ARCHITECTS ARE CRITICIZED FOR USING AESTHETICS AS A DISTRACTION.

promoting consumable objects in a commodity culture. As a result, the distrust of beauty for its own sake remains. Neil Leach recently argued in *The Anaesthetics of Architecture* (1999), that aesthetics distracts architects from the social and political problems inherent in a capitalistic society. Architects are encouraged to create a seductive environment of images, which has a narcotic effect on the viewer, resulting in a numbness or anesthesia. Similarly, in a recent issue of *Harvard Design Magazine*, Margaret Crawford faults architecture schools for making "pure" or "high" aesthetics the dominant value system. Students who enter the real world, she maintains, "remain marginal in a building culture predicated on economic rather than cultural capital" and are encouraged to "seal themselves off from the vitality and energy of low [culture]."

Beauty's comeback

Nevertheless, in artistic circles of the early 1990s, beauty began to make its return as a topic at panel discussions, symposia, and the isolated essay. By the end of the decade came anthologies, such as *Uncontrollable Beauty* (1998), and such exhibitions as *Regarding Beauty.*

The interest in aesthetics in architecture has mounted, as well. In a recent issue of *Journal of Architectural Education*, architectural historian Ritu Bhatt makes a case for the possibility of an "objective aesthetic evaluation." Bhatt contends it is a form of "practical reasoning, and our responses, when we are called upon to justify them, can be emotional and rational." Her argument has some parallels with those presented by philosopher Elaine Scarry, who notes in her book *On Beauty and Being Just* (1999) that aesthetics and ethics are not incompatible: The "perceptual acuity" required for aesthetic evaluation helps to







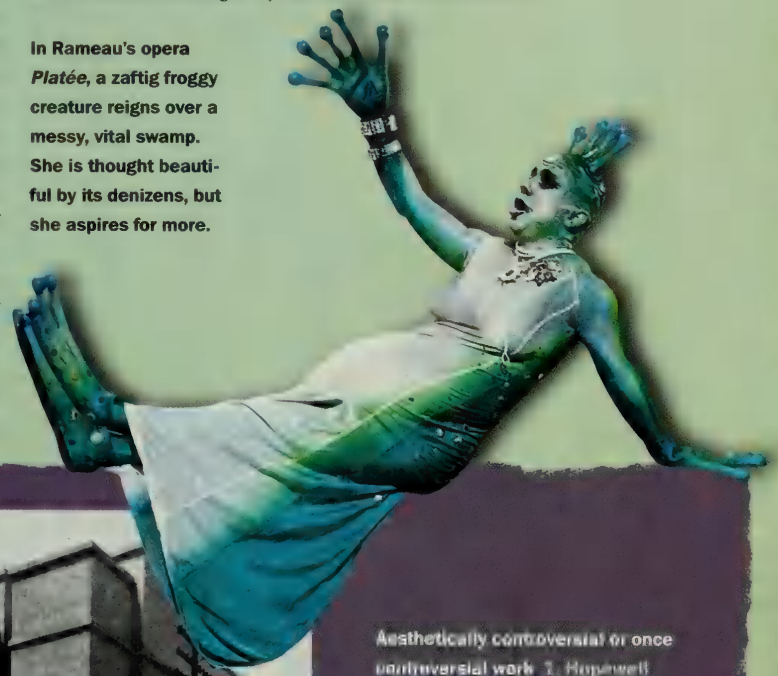




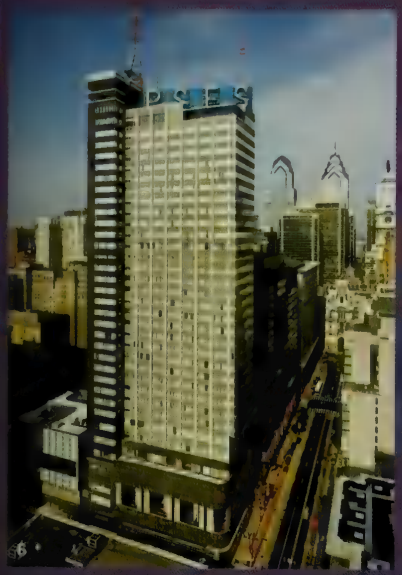
address injustice, and "beautiful things give rise to the notion of distribution, to a lifesaving reciprocity, to fairness."

So, how do we evaluate what is "beautiful"? We are not advocating a return to "objective" criteria or universal qualities, such as order, unity, harmony, rhythm, and proportion. Nor are we declaring that "anything goes." We cannot be happy with aesthetic standards exclusively based on sense impressions, nor on the intellectual interpretations of a building's meaning. We recognize the need for all of the above, and more. And so we recommend a position taken by Immanuel Kant over 200 years ago. Kant did not consider taste (aesthetic judgment) purely subjective, nor did he believe that "taste should not be argued about," since aesthetic judgment could not be scientifically demonstrated. As Luc Ferry points out in *Homo Aestheticus*, Kant's contention was that although taste could not be argued scientifically, it could be discussed. Through discussion—or an intersubjective community—we could come to a form of aesthetic agreement.

This approach that Kant describes, therefore, is what we are trying to continue with in our debate about beauty, and the difficulty of evaluating it, in the following pages. We have encouraged our writers to draw out the architects' aesthetic intentions and grapple with their own aesthetic responses to each of the buildings. (The writers did not necessarily agree with RECORD's own judgments, but that is not the point.) The results of their efforts may or may not lead to any deeper understanding or insights about aesthetic evaluation. The main thing is to keep the debate going. Beauty is subversive. When not discussed, it has ways of showing us we need it. Too often the big banal uglies taking up the landscape result from a lack of concern and an immunity to beauty. Only when we come across a timeless example of great architecture are we reminded that we have been shortchanged by the rest of the built world. ■



In Rameau's opera *Platée*, a zaftig froggy creature reigns over a messy, vital swamp. She is thought beautiful by its denizens, but she aspires for more.

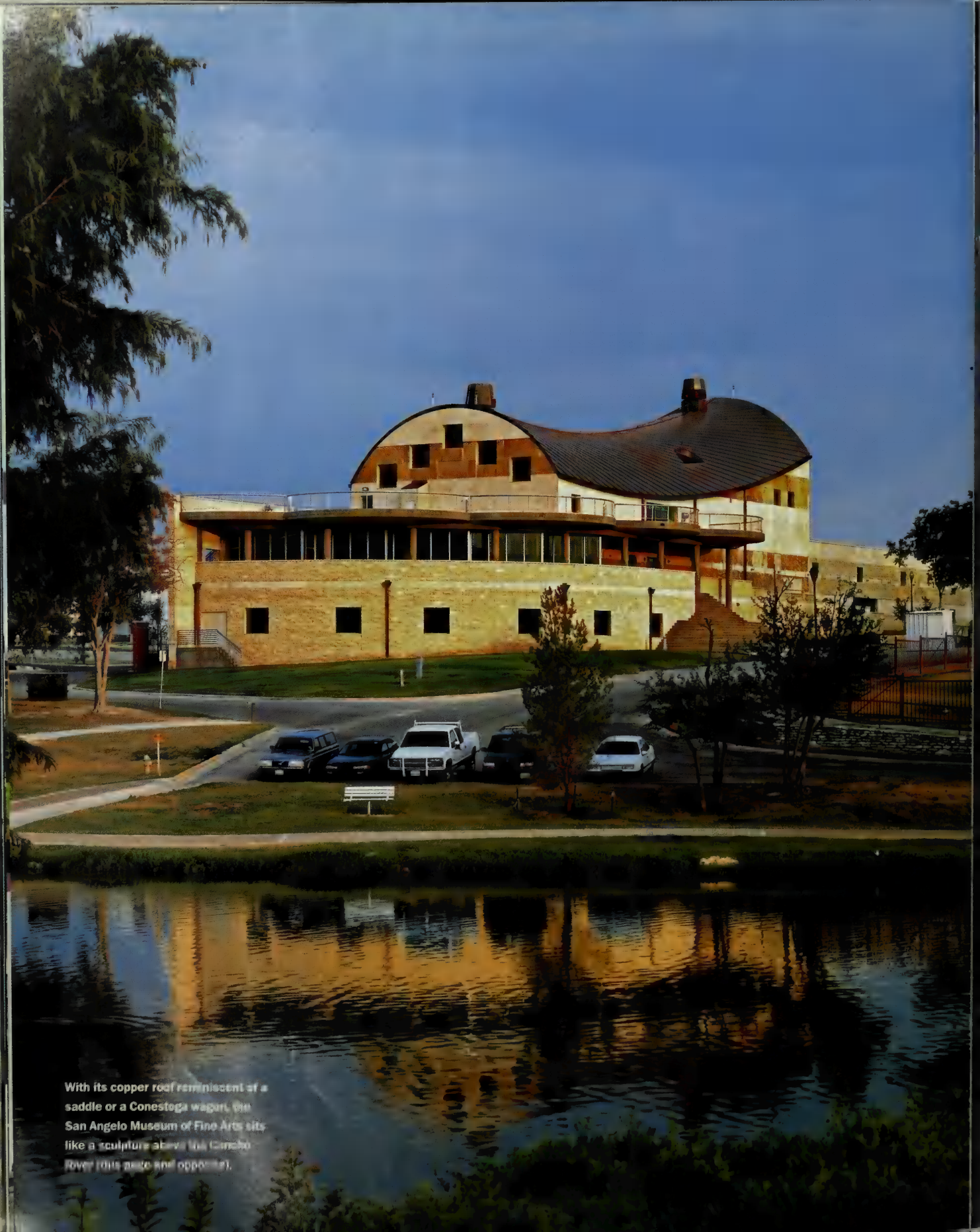








Aesthetically controversial or once controversial work 1. Hopewell Baptist Church, near Edmond Oklahoma, **Bruce Goff, 1948.** 2. Blenheim Palace, Oxfordshire, England, **John Vanbrugh and Nicholas Hawksmoor, 1716.** 3. Fontainbleau Hotel, Miami, Fla., **Morris Lapidus, 1952.** 4. Guggenheim Museum, New York City, **Frank Lloyd Wright, 1959.** 5. School of Art and Architecture, Yale University, New Haven, Conn., **Paul Rudolph, 1963.** 6. PSFS Building, Philadelphia, **Howe and Lescaze, 1932.** 7. New Parliamentary Building (Portcullis House), adjacent to Houses of Parliament, **Michael Hopkins, 2000.** 8. Larkin Company Administration Building, Buffalo, N.Y., **Frank Lloyd Wright, 1904.**



With its copper roof reminiscent of a saddle or a Conestoga wagon, the San Angelo Museum of Fine Arts sits like a sculpture above the Concho River (this page and opposite).

BRASH BEAUTY A bold, quirky building by HHPA's Malcolm Holzman for Texas' SAN ANGELO MUSEUM OF FINE ARTS is intentionally dissonant



By David Dillon

Malcolm Holzman, FAIA, doesn't design conventionally beautiful buildings, classically proportioned and finished with Euclidean precision. Vitruvian maxims about firmness, commodity, and delight don't run through his head as he sits at his drawing board. He prefers surprising connections. Like a jazz musician playing just off the note, he improvises as he goes, using dissonance and counterpoint as basic parts of his repertoire. "Architecture," he argues, "should wake people up. It should make their eyes pop open and say, 'God, what am I looking at?'"

To some critics, this is the shallowest kind of architectural aspiration—Hollywood special effects applied to buildings. To Holzman, a principal at Hardy Holzman Pfeiffer Architects (HHPA), it represents honest enthusiasm for variety over pristine uniformity. He prefers Hawksmoor to Wren, admires Furness, and could live happily in almost anything by John Soane. "Beauty for me is broad and accepting, not pure," he explains. "By mixing things up you can get far richer effects than if you stick to one or two materials. That would be like eating a twelve-course meal of tofu. I couldn't do it."

"BY MIXING THINGS UP," SAYS HOLZMAN, "YOU CAN GET FAR RICHER EFFECTS."

Starting with early projects, such as his firm's 1983 radio station WCCO in Minneapolis, Holzman has experimented continuously—some would say obsessively—with new materials and fabrication techniques, playing rough against smooth, dumb against smart, elegant against everyday. Clients who aren't intrigued by materials, color, texture, and collage should obviously choose somebody else.

Holzman's approach has yielded dazzling results, as well as a few genuine head-scratchers. One of his more controversial projects is the $6 million San Angelo Museum of Fine Arts, which opened last year. It is not a safe, neutral place with pure white galleries and a wash of official good taste. It's quirky, colorful, theatrical, occasionally perverse, and definitely not what a visitor might expect to find in a small (population 95,000) west Texas city 90 miles from the nearest interstate, on the road to nowhere.

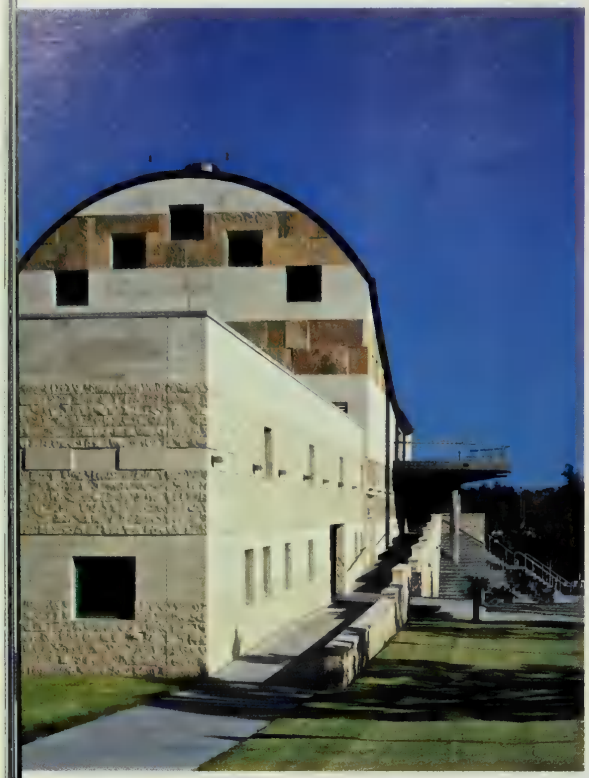
David Dillon is the architecture critic of the Dallas Morning News *and a contributing editor of* ARCHITECTURAL RECORD.

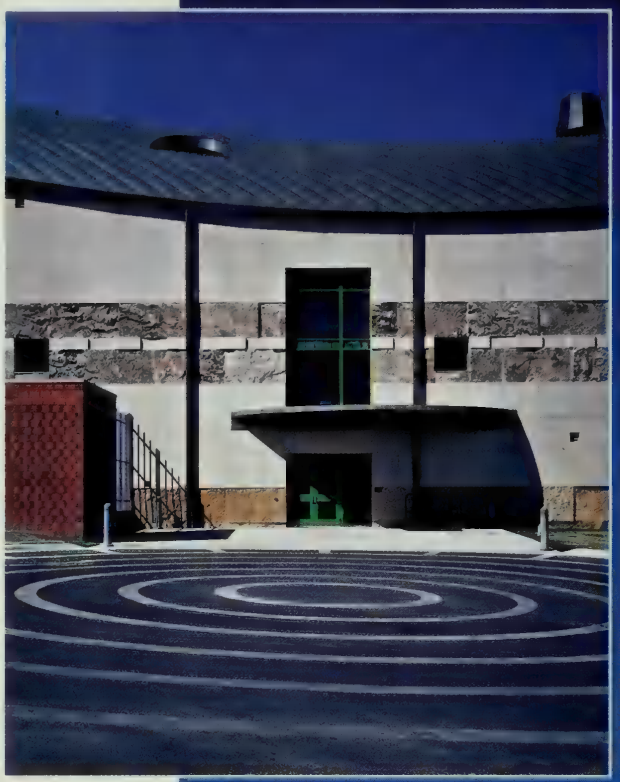
"I'd had it with serene seriousness and decided to take a chance on something different," explains museum director Howard Taylor, who arrived in San Angelo from Philadelphia 14 years ago and never left. "Our building breaks all the rules."

Though barely 30,000 square feet, the museum sits like a monumental sculpture above the sleepy Concho River. One end bellies out into a large, semicircular lecture and reception room. There, a terrace and sculpture garden above it offer sweeping views of a downtown that has changed little since the 1930s. A long, narrow volume at the building's opposite end, containing classrooms and ceramics studios, recalls the simple structures of nearby Fort Concho, the museum's previous home. Between the two ends lie the main galleries, one 38 and the other 45 feet tall, both single-story with exposed trusses, planked ceilings, and arcs of square punched windows, challenging curatorial convention. Crowning everything is a swooping copper roof reminiscent of a saddle or Conestoga wagon, though it also responds to the sloping site.

While such forms might be considered over the top in New York or Philadelphia, they seem right at home on the prairie. Unhampered by design review boards, academic debates, or the sway of fashion, flatlanders have often embraced bold, even bizarre architecture. It was no fluke that Fort Worth got Louis Kahn's Kimbell Art Museum, or that Oklahoma City ended up with John Johansen's Mummers Theater and the eccentric houses of Bruce Goff. Just up the road, in Bartlesville, Okla.,

Project: *San Angelo Museum of Fine Arts and Education, San Angelo, Tex.*
Architect: *HHPA—Malcolm Holzman, FAIA, partner-in-charge; Douglas L. Moss, AIA, project architect; Nestor Bottino, AIA, Chris Kaiser, AIA, construction architects; Caroline Bertrand, interior designer; Michael Connolly, Yasin Abdullah, Maya Schali, Winslow Wu, design team; Steven Stainbrook, graphics; Joyce Louie, interiors*
Associate architect: *Chakos Zentner Marcum Architects*
Engineer: *José I. Guerra*
Consultants: *Robert Davis (lighting); Boner Associates (acoustical)*
General contractor: *Templeton Construction*





Limestone from the quarry's surface acquired color and rough texture through exposure to the elements. Varied colors and thicknesses, arranged in horizontal bands, animate the facade (this page and opposite).

Frank Lloyd Wright's Price Tower sprouted. And the last skyscraper renaissance took place in Houston and Dallas.

Nobody on the museum's building committee had ever heard of Holzman. Nor had they the slightest interest in architectural theory. "Out here, architects who talk in abstract terms about what a building wants to be talk themselves right out of the job," says the director. What the committee did want was a museum with richness, some connection to the place, more civic character than Fort Concho, and enough flair to put San Angelo on the map. Everything else was up for grabs.

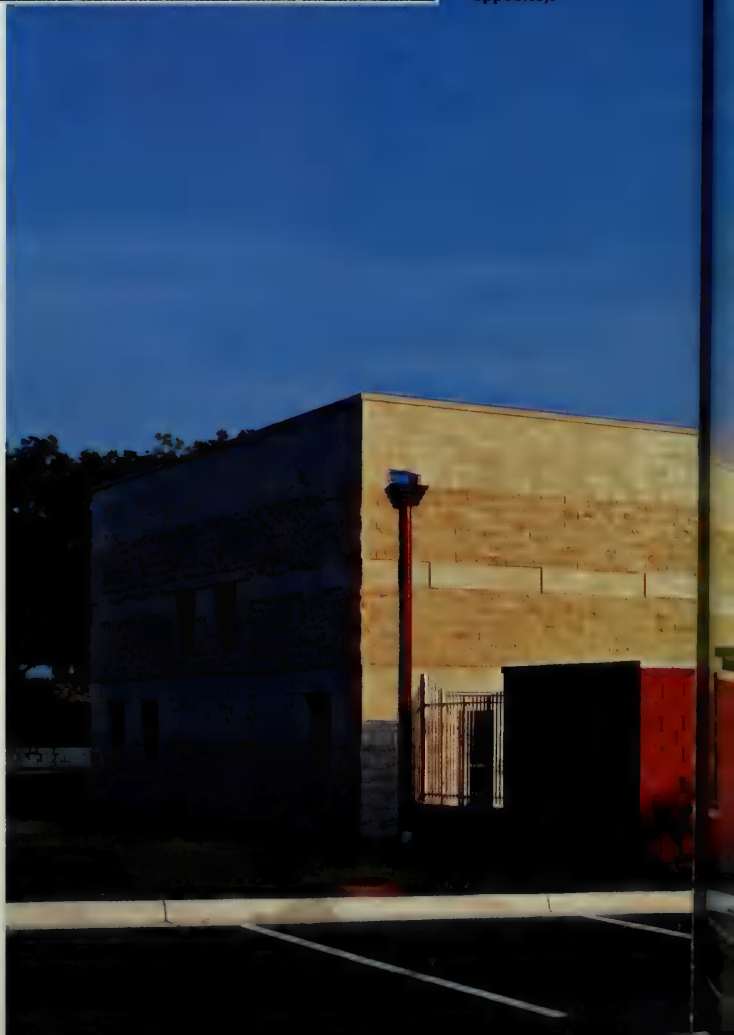
The committee liked the solidity and odd, off-key quality of HHPA's 1985 addition to the Virginia Museum of Fine Arts and kept a close eye on two other Texas projects then under way: the firm's Walsh Center for the Performing Arts in Fort Worth and their Murchison Performing Arts Center in Denton.

The Walsh Center is a canted cube faced with four kinds of stone and packed with ramps, staircases, and balconies that create a sense

"THERE ARE NO GOOD OR BAD MATERIALS," SAYS HOLZMAN. "EVERYTHING DEPENDS ON HOW YOU USE THEM."

of fluidity and purposeful chaos. One soaring wall of red D'Hanis tile looks like an abstraction of Bryce Canyon. The Murchison Center is a collage of brick, stone, tile, and galvanized zinc with blasts of red, coral, blue, and yellow and plenty of cheap materials dressed up to look expensive. The main lobby is framed by rows of metal air ducts and concrete columns that make it seem both grand and casual, like a pop version of Karnak. "My position is that there are no good or bad materials," says Holzman. "Everything depends on how you use them. You can go with the grain or against it; the only thing you can't do is torture them."

Holzman interpreted the building committee's demand for richness to mean stone, and he chose a west Texas limestone from nearby



1. *Art studios*
2. *Museum support*
3. *Lobby*
4. *Galleries*
5. *Meeting*
6. *Sculpture garden*
7. *Outdoor art studio*



UPPER LEVEL

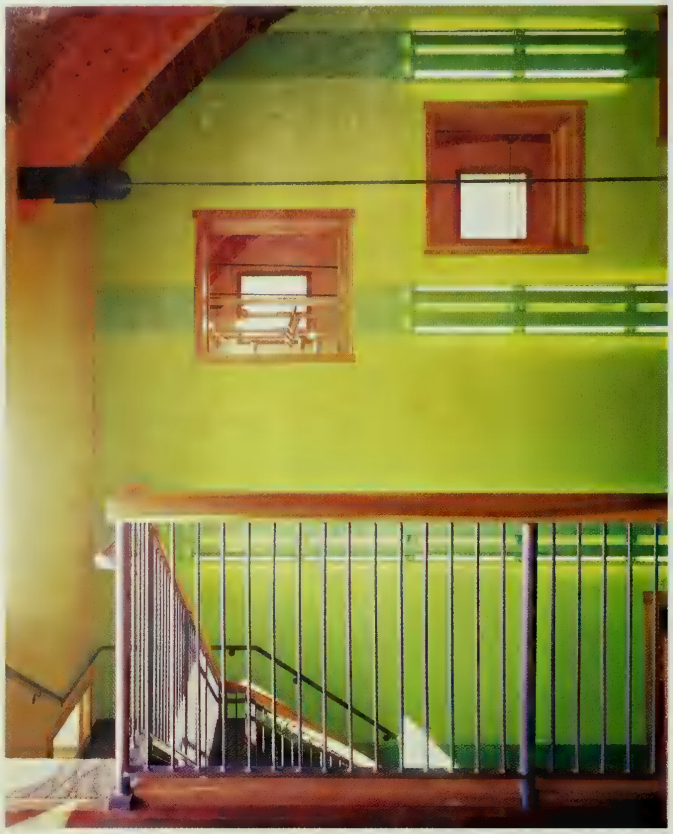


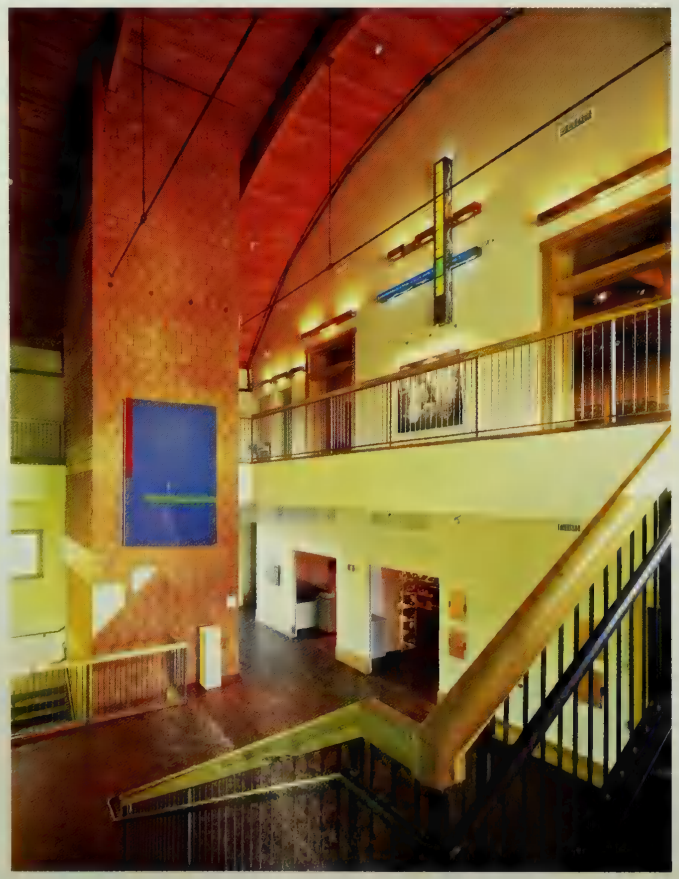
MAIN LEVEL



LOWER LEVEL







Garden City: not flawless blocks from the depths of the quarry, however, but discarded ones lying on the surface. Scoured and discolored by wind, rain, and even meteor showers, they had the textural depth and richness to animate massive walls. Holzman had the stone cut into four-by-eight-foot blocks and laid up in bands separated by narrow sawn pieces, like a quilt. The facade's colors range from ocher to creamy yellow and dusty white. Light not only bounces off the walls but seems almost to reside in them. The building committee took one look at a mock-up and approved.

Around patios, loading docks, and elevators, Holzman used the same red D'Hanis tile as at the Walsh Center. The floors are end-grain mesquite, which weathers to a deep reddish brown, and the gallery ceilings are stained pine, recalling those at Fort Concho. Throughout the building Holzman's detailing is exuberant, but often intentionally imperfect. Instead of matching the grain on the wainscoting, for example, he butt-joined pieces of slightly different color and texture to de-deify the joints. "I've learned to accept the craftsmanship of the time," he says. "Unless you've got an incredible budget, it's easier these days to get people not to line things up than to work to incredible tolerances."

Yet for all its contrariness, this aesthetic is not mocking or sardonic. Unlike Robert Venturi's, Holzman's wry smile doesn't devolve into an ironic detachment and ultimate suspension of qualitative judgment.

"IT'S EASIER TO GET PEOPLE NOT TO LINE THINGS UP," SAYS HOLZMAN, "THAN TO WORK TO INCREDIBLE TOLERANCES."

Holzman positions himself as playful but serious, more blue-collar than ivory tower. "You don't have to be trained in architecture to understand what I do," he claims. "I try to get a hook into people through materials because that's what they are constantly bumping up against." The result is work that challenges, rather than soothes, the eye.

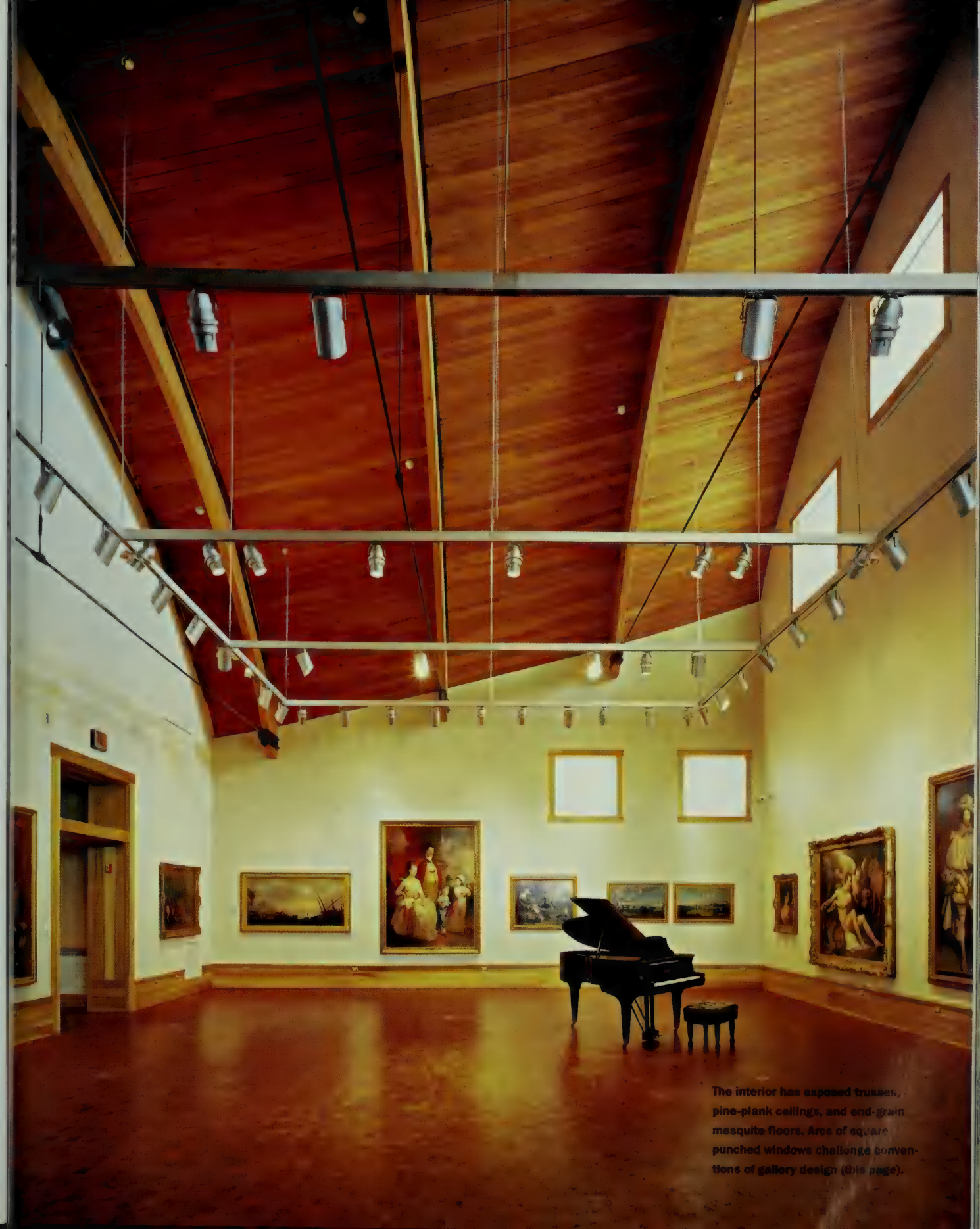
A year after the museum's opening, Taylor still meets people who tell him his building is ugly and urge him to prosecute whoever perpetrated it. Some dislike the saddle roof; others object to the motley stone or the lime green window trim. "A sculpted building like ours startles people because it challenges conventional ways of seeing," he responds. "Architecture can't be all right angles and smooth surfaces—there has to be some fun."

For the most part, however, San Angelenos are delighted with their new museum, referring to it on posters and flyers as "the jewel of the concho." The new county courthouse and the chamber of commerce headquarters have taken cues from its stone walls and swooping copper roof. It's about to appear on the cover of the regional phone book. Even architecture professors are bringing their students for a look.

What they see is a building that defies easy classification: A vernacular modern structure with Richardsonian elements and neo-Victorian decorative touches. It's risky, quirky, sometimes (though not usually) jumbled architecture—and about as far from serene seriousness as one can get. ■

Sources
Curtain wall: *Kawneer*
Masonry: *Texastone Quarries (Hadrian Texas limestone)*
Windows: *Kawneer (aluminum)*
Paints and stains: *Benjamin Moore*
Lighting: *LSI (gallery); Kim (exterior)*
Elevator: *Dover Oildraulic*
Wall panels: *Marlite (colored wood)*

WWW *For more information on the people and products involved with this project, go to* **Projects** *at:* **www.architecturalrecord.com**



The interior has exposed trusses, pine-plank ceilings, and end-grain mesquite floors. Arcs of square punched windows challenge conventions of gallery design (this page).

WEIRD BEAUTY With an outrageously colorful facade, Ashton Raggatt McDougall's STOREY HALL jazzes up its polite Melbourne setting





By David Clark

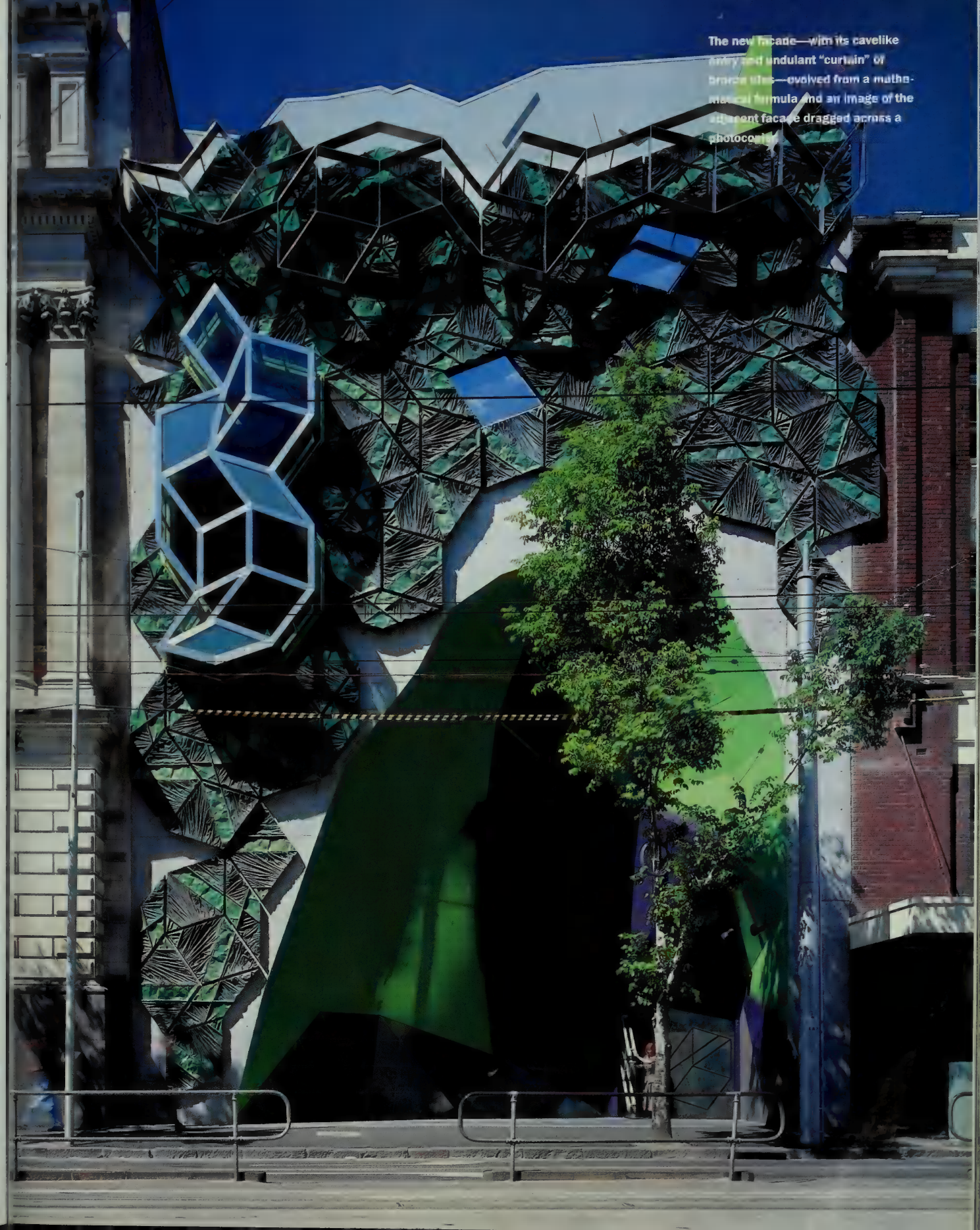
The controversial facade of Storey Hall's annex sits full of bravado and splendid ugliness beside the original 1886 building's authoritative classicism. Clashing with the Old World order's assuredness and certainty, it raises, well, one big question mark. With its grottolike entrance painted lurid green and purple, the facade has a pattern of cast-bronze lozenges hanging like textured drapery. The shock value of its presence on the street is not in doubt, though some try to resist it. One prominent Sydney architect was prompted to exclaim, "Thank God our cities don't all look like this!"

But the question of whether it's ugly or beautiful defies an easy answer. Architecture critic Charles Jencks, in his book *The Architecture of the Jumping Universe*, was excited by Storey Hall's possibilities: "No longer the classical ordinance, no longer the boredom of the Miesian curtain wall!" he wrote. "Here is a different way of ordering the landscape, which is more organic and chaotic than classical and modern systems. Potentially a whole street system [like this] could be as harmonious as those of the past." Focusing on architecture that responds to Chaos Theory, nonlinear dynamics, and other scientific developments, Jencks cites—amid internationally celebrated projects by Gehry, Eisenman, and Libeskind—the more obscure Storey Hall by Melbourne's Ashton Raggatt McDougall Architects (ARM).

Storey Hall is a complex of auditoriums and galleries at the Royal Melbourne Institute of Technology (RMIT), a downtown inner-city campus with a progressive building campaign designed to reflect the university's position at the forefront of technical and professional education and research. To create the complex, ARM renovated a Victorian hall and built an adjacent annex. The firm's early masterstroke was to convince the university board that its program could not fit into the original structure and that two small buildings beside it should be demolished to allow for an addition. For a university board to embrace this design is remarkable. As

David Clark is a Sydney-based writer who frequently covers architecture and design.

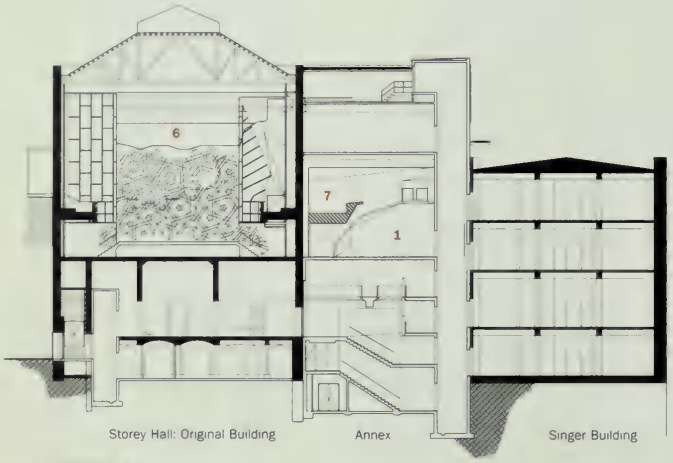
Project: *RMIT Storey Hall, Melbourne*
Architect: *Ashton Raggatt McDougall—Howard Raggatt, principal, Neil Masterton, Nigel Fitton, Paul Minifie, design team*
Engineer: *John Mullen & Partners (structural/civil); Scott Wilson Irwin Johnston (mechanical, hydraulic, electrical); Watson Moss Growcott (acoustical)*
Conservation: *Allom Loell & Assoc.*
Surveyors: *Peter Slattery & Co., Bruce Thomas & Associates, Taylors*
Contractor: *Hansen Yuncken*



The new facade—with its cavelike entry and undulant "curtain" of bronze tiles—evolved from a mathematical formula and an image of the adjacent facade dragged across a photocopier.



SWANSON STREET ELEVATION



SECTION A-A



ANNEX ENTRY LEVEL

1. *Foyer*
2. *Void*
3. *Gallery*
4. *Study*
5. *Basement*
6. *Auditorium*
7. *Balcony*

Raggatt explained, "They briefed us, I think even to the point of saying: 'You'd better deliver one of the most amazing buildings we've ever seen.'" RMIT has become a great patron of new Melbourne architecture, and Storey Hall must be understood in that context.

The annex solved major spatial problems: Now circulation, support spaces, and lobbies reside in the new structure, feeding sideways into the existing building's auditorium. A smaller auditorium is tucked into the annex's base, while galleries and a cafe occupy the older building's entry level. (The Singer Building, beside the annex on the opposite side from the original hall, may eventually become part of the Storey complex, as well.)

At first, there appears to be no connection between the two buildings. But as Howard Raggatt reveals, the architects began the design with their "old trick" of smearing an image of the original building across a photocopier to make a "blur"—a zone of uncertainty—reflecting the nature of life and the complexity of new sciences, prompting reinterpretation by the architects. ARM also recognized, however, the simultaneous need for exactness because, after all, the building had to be built.

"The process is an exegesis that seems to draw latencies, some insight, from the original piece," says Raggatt. It's a stream-of-consciousness architecture that explores the human condition through apparently random associations. "You can think you know exactly what you're doing, and therefore set yourself a lot of constraints," he adds. "Or you can resist self-censorship, even the idea of whether you like something or not."

Slurring the image created a great arc of blackness that ultimately became the building's grottolike entrance. Its green and purple paint, blurred at the edges "like smeared lipstick," as Raggatt puts it, refers to the hall's history as an Irish community center and later home to a feminist group whose colors were green, purple, and white. So, some aspects of the design process are left to chance, without conscious decision making, while others rely on specific knowledge and explicitly conscious decisions.

To "exact a blur," ARM uses pixels, the precise and discrete units of the digital world, to render it buildable. In this instance, the architect appropriated the Penrose tile: a geometric system developed in the early 1970s that reduces to two the number of different tiles needed for an aperiodic (or nonrepeating) system capable of covering an infinite plane. Prior to this discovery, man-made aperiodic tiling systems typically used some 20,000 tiles, although, as was later learned, a binary system also exists in nature. With Penrose tiling, ARM found a representation of nature and the cosmos, reduced to two—a fat and a thin tile—that could pixelate its blur. On the annex facade, the pattern appears in cast-bronze lozenges.

Inside the building, the ornament really takes off—emerging in a spectacular stairway and the fractal surfaces of foyers, before finally exploding in all its glory in the auditorium, completely covering the interior with a new, fractured skin that melds together the walls, floors, and ceilings. The space at once evokes the natural world and the inside of an arcade game—like an animated view of a microscopic wonderland.

Raggatt compares the cavernous entry to the gates of heaven and hell. And the interior certainly seems a bit hellish and a bit heavenly. The auditorium is a Garden of Eden, reached only after an extravagant journey.

Immediately behind the entrance is the building's stairwell or lobby, a high, compressed space spanning three levels with a swooping cantilevered concrete stair climbing through it. The void is moody and raw, with a gray concrete interior and accretions of faceted upholstered panels, dimly lit by the glow of backlit-paneled walls. High above, a skylight's panes bear the same Penrose-tile pattern as the facade. The concrete stair curves up and passes audaciously close to a convex, sprayed-concrete wall (the back of the cavelike facade) before arcing away, barely averting collision. This sweep upward into a fantastically sublime interior, like Piranesi's "Carceri," is one of the design's great delights.





n the interior, as on
e street front, the
nrose-tile pattern
nerated faceted sur-
ces that appear to
ow like moss in a
ndscape of existing
oclassical elements.
e large auditorium
is page) in the origi-
l building, for
ample, still reveals
rinthian capitals
eneath the balcony
ght) and arched
ches near the stage
bove) amid the explo-
on of pattern.



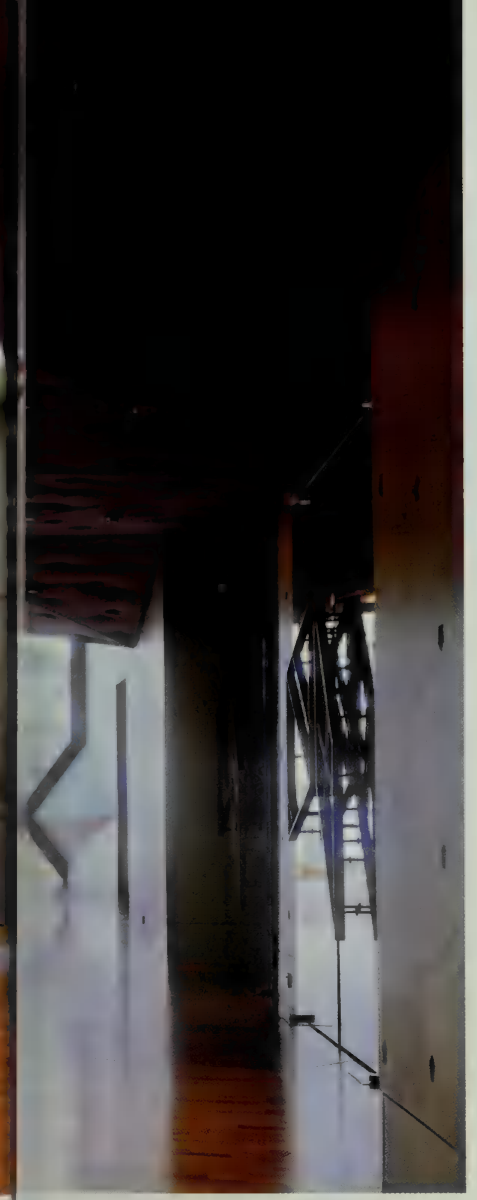
From here, you either descend into the cryptlike space of the ancillary auditorium's lower foyer, or take the purgatorial climb up to the main auditorium past a number of tricks and treats designed to distort space and self-perception. At the base of the stair, a fun-park mirror warps one's image in curved sheets of polished steel; on the next level, gender-bending toilets glow pink for boys and purple for girls (where the heck am I?). The stairway curves up under a canopy of black plastic stretched from the walls, further confusing the spatial boundaries.

One experiences all this before reaching the digitally conceived main foyer with its encroaching, crumpled walls that look frozen in motion. This lobby refers back to the city both literally—one can stand in the Penrose-faceted window box that punches out from the street facade—and figuratively—with the inclusion of a large yellow wall of shifting planes, hiding a second stairway up to the mezzanine. This wall is a copy of an infamous Melbourne sculpture, disdainfully dubbed "The Yellow Peril" by the populace, which once stood in the city. By bringing it back, ARM plays with ideas of cultural memory. The provocative sculpture is among the building's many "prompts," or references to the past, that may explain the words "resurrection city," embedded in the facade's bronze tiles.

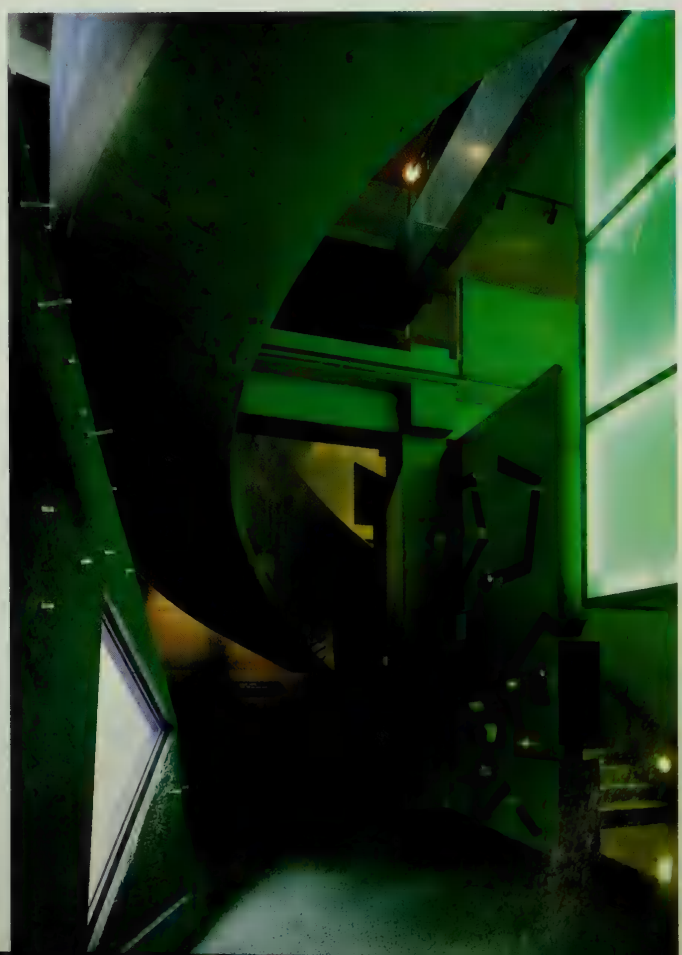
As for new sciences, Storey Hall relates to them in its layered, decorated, faceted surfaces, rather than in its spatial qualities. Here, the Penrose system essentially wallpapers boxes with crinkled walls. The project was partly a renovation, but even in the new annex, the plans and sections remain largely conventional, except for the dramatic stairway. As Raggatt himself says, "Virtual architecture provides useful jargon. Jargon is good, the popular is good, and the idiom of the moment is good, but it's not the core substance of the work—it's its mannerism."

In this sense, ARM has taken advantage of current technology to create a building that is visually of the moment, appropriate to the university's wish to appear as leaders in education. But in so doing, the architects still allude to age-old architectural questions, asking how to place oneself in the cosmos and how to attribute that meaning to built form.

Is it possible that ARM operates with some kind of blind intuition, pulling together a concoction of references that are both cosmogenic and historical into a blur that they must then build? "I think architecture is tragically, pathetically material," says Raggatt. "But it has the cultural potential to be intellectually meaningful. There is an







In the annex, a great semicircular cantilevered concrete stairway is a dramatic and sculptural presence in the three-story entry foyer (right top and bottom). Throughout the interior, as on the facade, faceted planes give the walls a geometric three-dimensionality (opposite).

inherent failure of aspiration just because it is material and can never by definition transcend its own profound limitations."

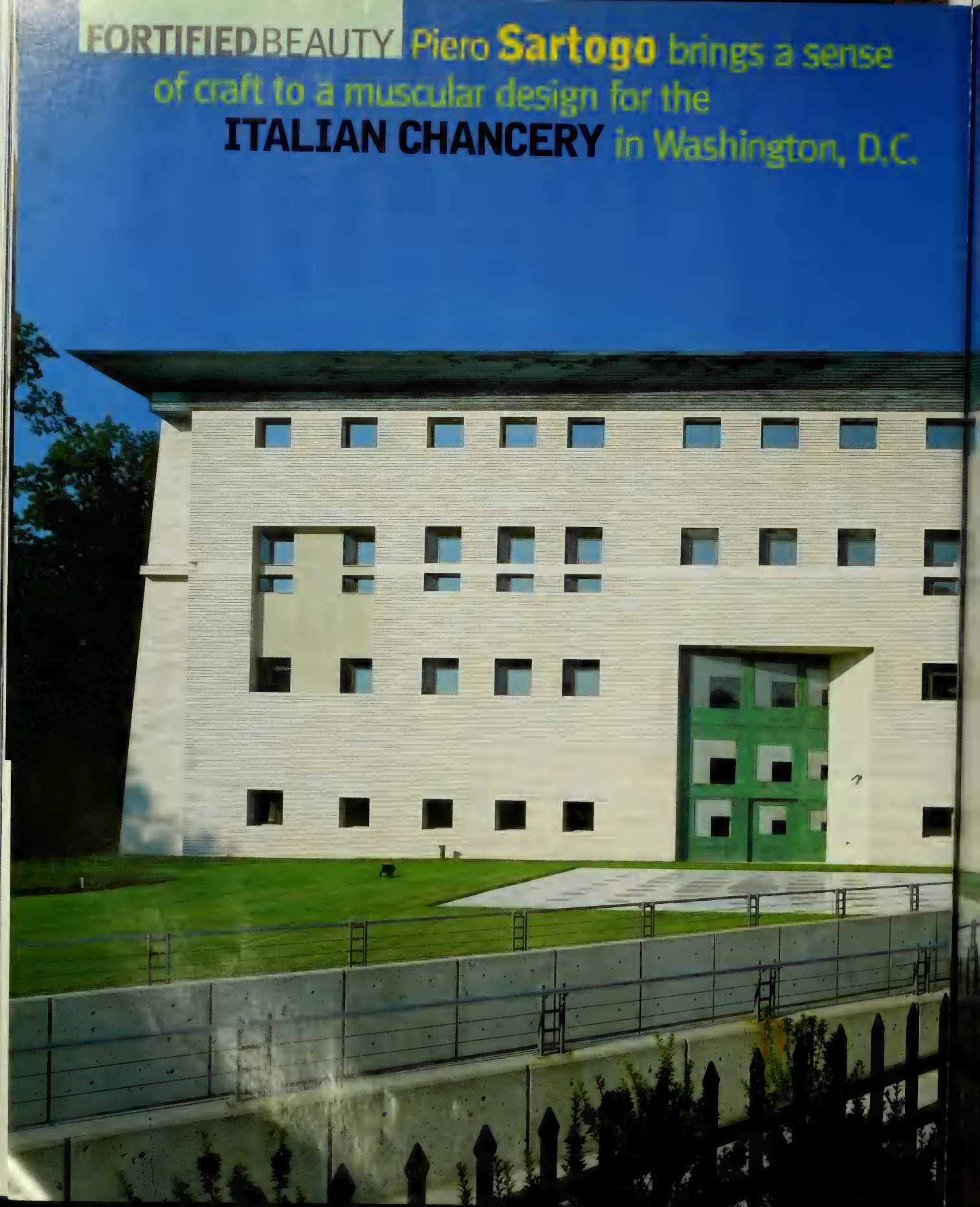
Storey Hall is an intriguing building, but is this project ugly or beautiful—or does it even matter? As Raggatt says, "Beauty has been one of the great denials of the 20th century. Since Oscar Wilde, everyone knows that style is all we have. I guess we hope a new beauty is emergent in the work. . . . Everything new is ugly until we learn to love it."

If Beauty can come from new ways of seeing, then surely Raggatt is correct. But at Storey Hall, it's hard to move beyond the themepark mood—the veneer and illusion. Iconoclasts, Ashton Raggatt McDougall challenge many notions about architecture and its meaning, but the perception of beauty goes beneath the surface: It must be felt authentically in space and forms, as well. That doesn't happen here. ■

Sources
Glazing: *Pilkington*
Skylights: *Luxalon*
Bronze tiles: *Artworks in Bronze*

WWW *For more information on the people and products involved with this project, go to* ***Projects*** *at:* ***www.architecturalrecord.com***

FORTIFIED BEAUTY Piero **Sartogo** brings a sense of craft to a muscular design for the **ITALIAN CHANCERY** in Washington, D.C.





While the building is set back considerably from the street, its formal and monumental facade and entrance give it a strong Embassy Row presence. The 10-inch-thick masonry block is covered with 3-inch-thick "bricks" of *pietra rosa di asiago*, a pinkish stone specially cut and beveled in Italy.

PHOTOGRAPHY: © ALAN KARCHMER

By Cynthia Davidson

Food was not on my mind when I visited the Italian Chancery in Washington, D.C., designed by the Italian architect Piero Sartogo. But ever since Talking Heads released its album *More Songs about Buildings and Food* in 1978, I have felt there was no more satisfactory pairing—not only in their rudimentary forms as shelter and sustenance but also as the discrete but complementary marks of civilization. As if sensing my personal, hidden conviction, Leo Daly, Sartogo's associate architect on the chancery, suggested that, following our tour of the building, we have lunch at Galileo, a highly rated Italian restaurant a short ride away.

The first course was a single, elegant grilled shrimp set upright on a curled tail and served on a pool of white-bean puree drizzled with bright green virgin olive oil. The dish offered an interesting counterpoint to the building I had just seen: where the food was a serious reappraisal of ingredients that surpassed the tradition of Italian cooking to become something surprisingly new, the embassy draws on the history of Italian architecture to become something problematic.

The long stretch of Embassy Row that has grown up along the northwestern end of Massachusetts Avenue is an array of periods and styles, from Beaux-Arts and neoclassical mansions to the dark glass box of the Brazilian Embassy, which sits across from the Italian building, and the new brick-and-timber Turkish Embassy up the street. When the Italians decided to move their embassy from an Italianate mansion in a

A CLEVERLY SITED SQUARE BUILDING IS BISECTED DIAGONALLY AND AGGRESSIVELY PUNCHED OPEN FOR AN INTERIOR PIAZZA.

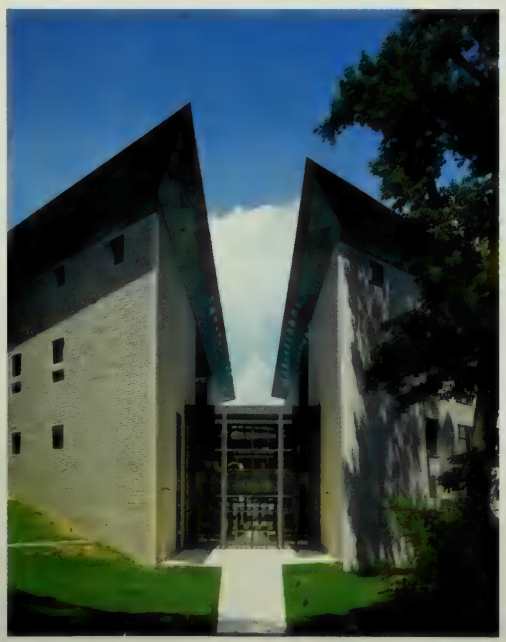
declining Washington neighborhood to property the Italian government owned just off Massachusetts Avenue, the ambassador asked the Washington office of Leo A Daly to organize an invited competition for Italian architects to design a new building. The mandate of the competition brief, beyond program and security, was that the building must convey the notion, or essence, of Italy (as if such a thing were possible in a single building).

Piero Sartogo, a Roman whom some might remember for his high Modern design in the original Bulgari shop on Fifth Avenue in New York City, won the competition over such well-known luminaries as Aldo Rossi, Renzo Piano, and Gae Aulenti. He did so by proposing a cleverly sited square-shaped building bisected on the diagonal and then aggressively punched open with a glazed, flat-domed atrium.

The chancery was completed this year. On visiting the building, I felt something naggingly familiar yet frustratingly unidentifiable about it. Handsome and strange at the same time, the building does not seem of

Cynthia Davidson is the editor of Any *magazine and two book series,* Writing Architecture *and the ten* Any *books published with MIT Press.*

Project: *The Chancery of the Embassy of Italy in Washington, D.C.*
Designer: *Sartogo Architetti Associati, Rome—Piero Sartogo, principal architect; Nathalie Grenon, associate architect; Susanna Nobili, collaborative architect; Sergio Micheli, project manager*
Executive Architect: *Leo A Daly, Washington, D.C.—Charles D. Dalluge, principal-in-charge; Ellis C. Whitby, project manager; Darren Zehner, project architect; Rod Mercer, zoning and planning; James P. Barone, landscape architect.*
Engineer: *Leo A Daly*
Consultants: *Andrew Diem Architects*
General contractor: *Beacon/Dioguardi*

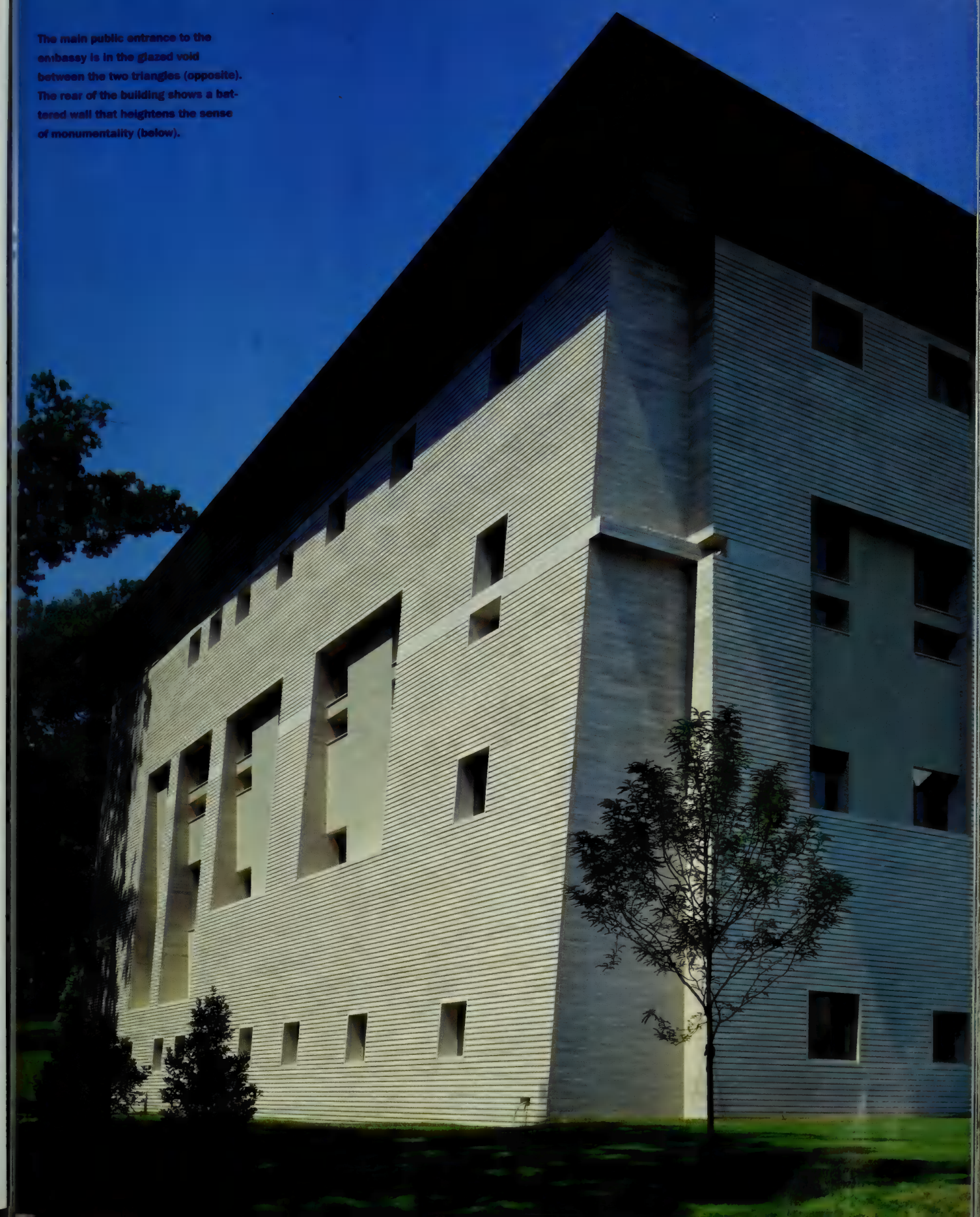


its time and place; not because Sartogo did not consider the site —"I am an Italian, we always start with genius loci," he said—but precisely because it seems outside an Italian tradition that, Sartogo, like the chefs at Galileo, is steeped in. For him, all buildings are "an organization system (the archetype), which becomes architecture only when it is altered and distorted by setting it into a context, both physical and cultural." The degree of distortion is the key.

The physical and cultural contexts for the embassy presented real constraints. The steeply sloped site is essentially triangular, with its long side facing onto Whitehaven Street, a dead-end residential road that

HANDSOME AND STRANGE, THE BUILDING DOES NOT SEEM OF ITS TIME AND PLACE; IT IS FAMILIAR, YET UNIDENTIFIABLE.

crosses Massachusetts Avenue on the diagonal. The two short sides are bordered by the woods of Rock Creek Park, to which the neighbors wanted access, even if only a visual one. The problem for the building was that the political and cultural staff of the embassy would be joined with an Italian military staff that had previously occupied space in a Washington office building. Their respective programs and identities needed to be kept separate.



The main public entrance to the embassy is in the glazed void between the two triangles (opposite). The rear of the building shows a battered wall that heightens the sense of monumentality (below).



The atrium serves not only as a programmatic joint but also as public exhibition and gathering space, dramatically changing the usually private program of an embassy. On both levels, furniture from top Italian designers is clustered in sitting areas. The public spaces are roofed with an asymmetrically glazed and flattened "dome," braced with steel.

Observations on security in the design of the Italian chancery

The prime location and dramatic profile of the chancery—both of which contribute to its identity as a distinguished public building—are not to be taken for granted these days. U.S. embassy planners would no doubt say that both features compromise its security. But the chancery challenges us to wonder whether a conspicuous and carefully crafted building is intrinsically stronger than one that adopts a reclusive or defensive stance.

Like every other nation, Italy considers the security of its foreign missions a top priority (even in Washington, where missions are better protected than in many other places). But the Italian Foreign Ministry did not want an embassy office building that advertised its apprehension. Design architect Piero Sartogo takes particular delight in contrasting the apparently austere exterior with the dazzling skylighted interior space.

The blocks of pink marble give the exterior walls a sense of weight and strength, and deeply recessed windows add to the impression of mass. But, from another angle, the building becomes totally transparent. Passersby on the street can look right through glass walls to the glass-covered atrium and out the other side to the woods beyond. The building may be a box, but it is a box sliced open by light.

Architects have always been drawn to the sheer drama and openness that glass conveys, and it is no longer the fragile product it once was. Engineered not to shatter and securely anchored to a matrix of steel, glass can rival masonry in strength. If anything, the chancery's atrium dome is overdesigned—in part to support the workers and equipment needed to clean the glass. Diplomatic visitors and guests enter through one main entrance and pass through a security checkpoint and two sets of glass doors before arriving in the light-filled central atrium. Consular visitors come in through a separate door, sparing further delays at the main entrance.

The ambassador has his own entrance on the building's east facade, where his car can drop him. Others will also be able to arrive at the main entrance by car. As an added (and unusual) convenience and a gesture of goodwill to the quiet, but car-filled, neighborhood, parking for visitors is provided in an underground garage.

The only obvious security measure in the interior is the lack of public access beyond the ground floor—no open stairs, for example, lead to offices above. Elevators control access to the upper levels, and they, in turn, are centrally controlled. This means that the embassy can host large public events and protect the privacy of its offices at the same time. The absence of a loading dock is either a security innovation or a curious planning oversight. Yes, there are strategically placed cameras and, yes, some of the glass is bulletproof and/or blast-resistant, but such features are typical at new government office buildings everywhere.

Highly visible, assertive architecture conveys confidence, and that confidence translates into trust and goodwill, the goals of public diplomacy. Well-designed embassies can further those goals. At a time when U.S. embassies are fleeing downtowns, retreating to remote suburban sites, and when they are being designed as walled compounds in the manner of low-profile, high-security prisons, it is good to see an embassy like Italy's use design to draw attention to itself in a way that proclaims cultural pride and national identity. The result is architecture that makes a positive political statement rather than one that resonates with fear.

—Jane C. Loeffler



Sartogo solved the site and programmatic issues with a split square, a concept that, he says, derives from the original square plan of Washington and the diagonal cut through it by the Potomac River. The embassy is thus a square within the square, a theme that continues in the building's detailing. The plan appears to derive from a building Sartogo often cites, the Palazzo Strozzi in Florence, built for two brothers whose separate dwellings frame a central courtyard. Sartogo distorts this *parti* for the Washington site and program by asymmetrically splitting the square on the diagonal, in essence creating a modern binuclear building. The ambassadorial staff occupies the slightly smaller triangle, and the visa offices and military staff, the slightly larger triangle. The difference in the size of the two pieces is masked by the "courtyard" space created between them, which becomes, as in many office buildings today, a double-height atrium. The atrium serves both as a programmatic joint and as a public exhibition space, dramatically changing the usually private program of an embassy. It is roofed with an asymmetrical, glazed, and flattened "dome," which is reminiscent, Sartogo says, of the view of the

THE HEAVY STEEL BEAMS NECESSARY TO SUPPORT THE GLASS INTRODUCE AN OVERSCALED MONUMENTALITY.

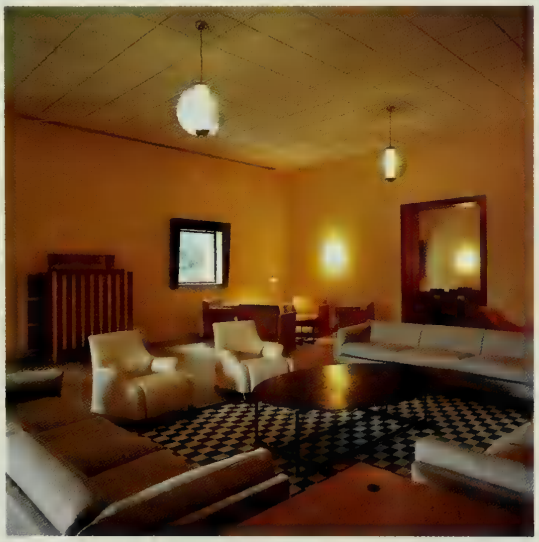
cosmos on the ceiling of Michelangelo's Laurentian Library. Physically, however, the heavy steel beams needed to support the glass introduce a problematically scaled monumentality.

The model of the Renaissance palazzo becomes more ambiguous in the articulation of the exterior. The public entrance to the embassy is in the glazed void between the triangles, facing Whitehaven Street. The formal facade and entrance are parallel to Massachusetts Avenue, which gives the building an Embassy Row presence, even though it is set back from the road. The oversized portal typical of the palazzo is both shifted off center and canted obliquely into the thickness of the wall. The massive copper portal is punched with square windows and at its center masks a discreet sliding door for the ambassador. Two rows of three-dimensional windows (Rossi-esque squares-within-squares) appear to punch into the depth of the wall, with the larger openings on the third floor, at what would be the *piano nobile.* Diagonally and to the upper left of the door, Sartogo cuts an inset into the wall that frames four windows, a gesture that plays tricks with the visual scale of the otherwise massive wall and reemphasizes the wall's thickness.

This thickness is due in part to the chancery's structure. With the



1. *Atrium ground floor*
2. *Bridge level 1*
3. *Elevators*
4. *Ambassador's entrance*
5. *Main entrance*
6. *Offices and reception areas*





exception of four, cylindrical, freestanding elevator cores, the structural columns are buried in the walls. Ten-inch masonry block is hung with insulation and then with 42,000 three-inch thick "bricks" of *pietra rosa di asiago,* a beautiful pinkish stone specially cut and beveled in Italy. The front elevation adjoins a battered wall that mimics in profile the steep drop in the land to Rock Creek Park, only some 20 feet away. The resulting thickness at the corner gives the impression of an urban fortification reminiscent of 15th-century Italianate projects.

The building's two triangular segments are topped with a deep, abstracted copper cornice intended to add shadow depth on the flat facade. Sartogo cites the cornice overhanging the courtyard in Rossellino's Palazzo Piccolomini in Pienza as his inspiration, but, in fact, it is much more akin to the hull-like roof of Le Corbusier's chapel at Ronchamp.

SARTOGO HAS CREATED SUCH AN ARRAY OF ANTIPASTI THAT THE ANTICIPATED MAIN COURSE IS ALMOST LOST.

By identifying elements of the building, one can begin to focus on the problem of its overall unidentifiable familiarity. Sartogo has incorporated myriad precedents, which he re-presents in a collage of Italian traditions, both historic and contemporary, but which are never clarified in an idea of the whole. Rather, he breaks the palazzo archetype apart with the strong diagonal and heavy skylight. The courtyard-as-atrium beneath it is a programmatic success, but the eye is distracted from the perspectival game of the flattened dome by the vivid colors used on the elevator towers and periphery walls. The function rooms that rim the atrium are innocuous, and the square-within-a-square theme introduced in the fenestration is repeated so often it becomes overworked, especially in the custom carpets. Like a chef who has used too many ingredients, Sartogo has created such an array of antipasti that the anticipated main course is almost lost.

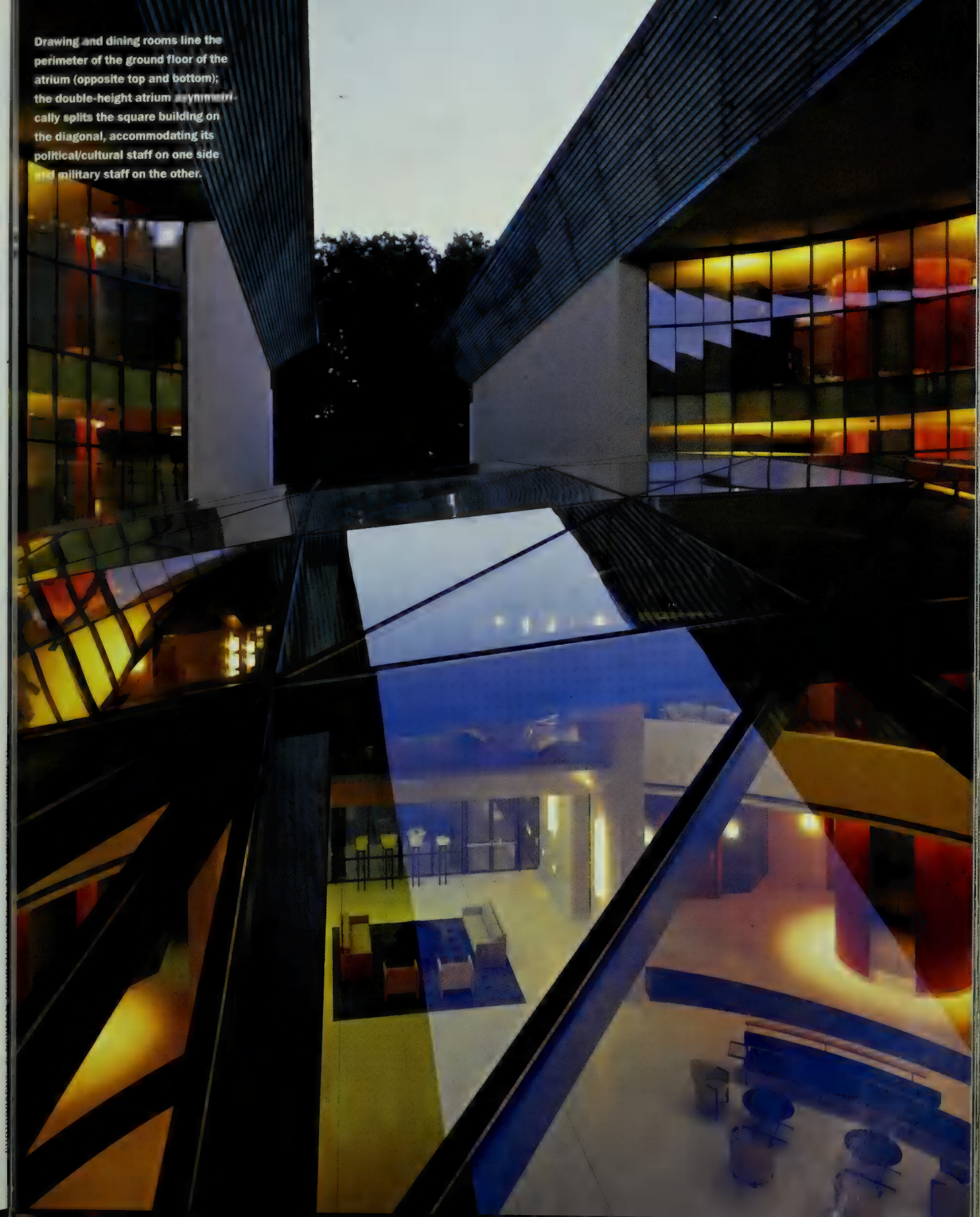
The embassy is a good neighbor—quiet, introverted with the siting diminishing the building's institutional mass—and the exterior stone gives it a warm, pinkish aura. By all accounts, it is one of the best new embassies in Washington. So why is it also frustratingly unidentifiable?

I love to visit Italy, to eat there, and to visit its palazzi, villas, and churches. But contemporary Italian architecture today seems to wander in the long shadows cast by the late Aldo Rossi. Is this why I am uncomfortable with the new Italian Embassy? Is the jarring juxtaposition of the beautifully detailed pale pink exterior with the heavy steel skylight and vivid palette on the interior the sign of a problem with Rossi's urban archetypes? Is the distortion of the archetype so extreme as to be no longer part of it? While I appreciate Sartogo's intelligence and his desire to alter the archetype of the palazzo, I do not understand the spatial and material choices that make these manifest. It is within such choices that the difficulty—and the beauty—of architecture will always lie. ■

Sources

Concrete: *Miller & Long Co., Inc.*
Structural steel: *S.A. Halac, Inc.*
Mechanical, electrical & fire protection: *Hess Mechanical Corporation, Wingate Electric, Livingston Fire Protection*
Security systems: *Electron Italia*
Stone and marble: *R. Bratti Assoc.*
Glass and glazing: *Galaxy Glass & Aluminum, Inc.*
Interior finishes: *C.J. Coakley, Chamberlin-Washington, D.C., W Contracting, Dupont Flooring Systems*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**



Drawing and dining rooms line the perimeter of the ground floor of the atrium (opposite top and bottom); the double-height atrium asymmetrically splits the square building on the diagonal, accommodating its political/cultural staff on one side and military staff on the other.



Masonry walls are stuccoed, and windows are deeply punched half-moons. Krier wanted the building to reflect the sun, to bask in its glow.

SENTIMENTAL BEAUTY Leon Krier's picturesque vernacular TOWN HALL/CHAPEL in Windsor, Florida, raises issues about making the old new

By Beth Dunlop



The new Windsor Town Hall by Leon Krier is straightforward in form, repetitive in detail, limited in its color prism. And yet it is a building that defies easy understanding, at once monumental and evanescent, sturdy and delicate. Conceived as a civic building and town center and planned by Duany Plater-Zyberk, the town hall is now also regarded as a chapel, an idea derived both from architectural form and actual function. While it is quite traditional, it poses as many questions as it answers. Tradition yes, but whose tradition does it draw on? The form is classical, like a little Greek temple, but its detailing is far more of a mystery, even to Krier himself.

"I once jokingly described its style as 'gladiatorial gothic,'" said Krier. "Does it recall the Catacombs, the Colosseum, the aqueduct in Segovia, the inner temple of Solomon in Jerusalem, the tabernacle in the desert, the German Gothic architecture in Poland? I can't trace it to a single source."

Krier's ideas have attracted many proponents over the years, and yet the architectural press, for the most part, has not embraced traditional architecture, preferring instead to promote the next new thing. I personally am not overawed by the latest and trendiest, preferring to seek out architecture that is carefully crafted, well proportioned and contextual, whether it is abstract or rather literal in its design, and in its interpretation of history. Further, I believe that architecture needs a language to impart its ideas. That said, let me address Krier's building itself.

"I ONCE JOKINGLY DESCRIBED ITS STYLE AS 'GLADIATORIAL GOTHIC,'" SAYS KRIER. "I CAN'T TRACE IT TO A SINGLE SOURCE."

The building is deceptively simple: A steeply pitched roof rises from 30 concrete piers that sit on a podium. Windows are deeply punched half-moons. Doors are 10 feet high. Inside, rows of pale oak pews flank a central aisle leading to the chancel. Masonry walls inside and out are white. Doors, rafters, and the ceiling are aqua. The oak of the pews, podium, and altar is washed with a stain that is faintly pale blue-green, as if a reflection of the painted ceiling. A single gold pylon stands in the nave, the only ornament. The decorative details are minimal and repetitive. The building is purposefully stark.

One of Krier's goals was to play with light of the blindingly strong, pure white Florida sunshine. From the outside, Krier wanted the building to reflect the sun, to bask in its glow by day, become incandescent, lit from within. Inside, the light is almost entirely reflected; the depth of the walls turns that piercing Florida sun into a more gentle, indirect luminescence.

The breeze is more direct. Krier designed this building to function both as a celebratory open-air pavilion, once the tall doors are opened wide, and a sheltering, even solemn, place of worship.

Still another of Krier's intentions was to make the building seem handcrafted, an idea that is conveyed in part from the thickness of the walls and in part from deliberate choices about craft. "The stucco has a

Beth Dunlop, an architecture critic who lives in Miami Beach, is the author of a recent book, A House for My Mother: Architects Build for Their Families, *as well as* Building a Dream: The Art of Miami Architecture.

Project: *Windsor Town Hall, Vero Beach, Fla.*
Owner: *Windsor Development/Torwest*
Designer: *Leon Krier, Claviers, France*
Architect: *Merrill and Pastor Architects, Vero Beach, Fla.—Scott Merrill and George Pastor, principals-in-charge; George Pastor, project manager*
Engineer: *Frank Farley, P.E.*
Lighting consultant: *Robert Laughlin*
General contractor: *Proctor Construction*



Flanking a public square, the building is located at the northeast end of Windsor, a New Urbanist town designed after Anglo-Caribbean antecedents found in nearby St. Augustine and in once-British islands. It is sited at a focal point of important avenues and vistas, and the monumentality of its scale, the Norse-like pitch of the roof, the unfamiliar size, and the repetition of its elements establish and proclaim its unique civic status as shelter and symbol to the community.



free-hand quality and softens the sheer repetitiveness and relentlessness of the architecture," he says.

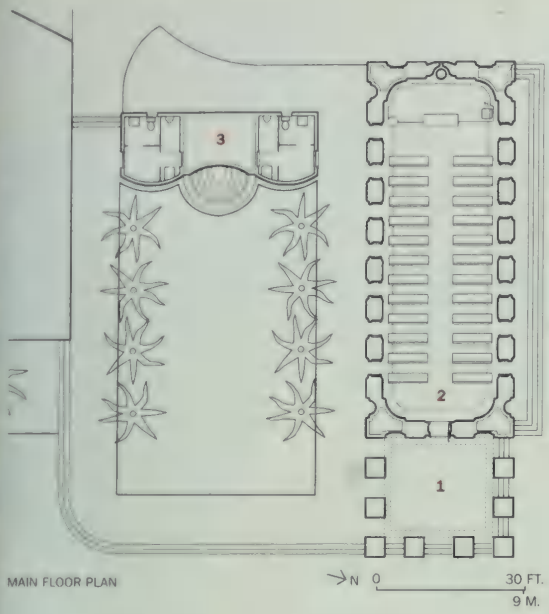
The town hall is familiar, triggering deep memories, and yet so fresh. Though it is as elemental and repetitive as, say, Fay Jones' chapels or early American meetinghouses, there is a profound quality to the architecture that shows clearly the complexity of thought behind it. And at the same time, it is quite easy to judge. The proportions are perfect.

Both shape and site give it a powerful presence; the roof rises some 15 feet above any other, and though at the northeastern end of Windsor, the town hall sits at the focal point of both important avenues and vistas. Furthermore, it flanks a public square. The monumentality of its scale, the unfamiliar size, and the sheer repetition of its elements establish and proclaim its uniquely civic status as shelter and symbol to the

ITS BEAUTY IS DIFFICULT, AT ONCE SO RECOGNIZABLE IN ITS FORM AND YET SO OTHERWORLDLY IN ITS DETAILING.

community. The building is deceptively simple. I have seen it on three different occasions under a variety of circumstances—day and night, sun and rain—and have heard several lectures and a recital there, but I suspect that if I had only seen it once, I would still come away with its image firmly imprinted in my mind. But its beauty is difficult. It does have a confounding quality: the building is at once so recognizable in its form, and yet so otherworldly in its detailing. As Krier explains, his clients kept wanting the hall to be a religious building complete with steeple. "I struggled against this for a while," he says, "proposing a separate campanile, but in the end it became a church."

His aesthetic intention "was not so much to create a mathematically precise composition, but rather to harmonize the disparate imperatives of contemporary building and development, allowing them to become a harmonious and aesthetic, if picturesque, whole." Indeed, Windsor Town Hall is one of just two completed buildings by Krier in the U.S. (the other is his own house in Seaside). That both are within new towns is no coincidence; Krier is inarguably one of the important theoreticians of the New Urbanist movement, and he designed the town of Poundbury in Great Britain for Prince Charles. At Windsor, he felt the



1. *Entrance portico*
2. *Nave*
3. *Fountain/rest rooms*





ward to produce a building that would offer a contrast to the domestic scale and style; Windsor's houses are based largely on Anglo-Caribbean antecedents found in nearby St. Augustine and once-British islands. Windsor's strict regulations (as in all towns planned by Andres Duany and Elizabeth Plater-Zyberk, it relies on an architectural code rather than zoning) dictated the Norse-like pitch of the roof. Krier had first seen Windsor in 1989 when only half a dozen houses were completed, but he was impressed. "Compared to all other neotraditional developments going on at the time, these were a true revelation in quality and scale, and above all, by the harmony and variety which I had believed quite impossible," he said, "knowing how difficult it is today to pursue an aesthetic of simple and unpretentious elegance."

In Krier's lexicon, "bad architecture" is a style unto itself. "It's not due to a lack of means or imagination, but quite simply due to intellectual confusion, like building a cottage the size of a palace, or palatial architecture to the dimensions of the cottage, making museums look like factories, or factories like temples. Cloning buildings is a civil disaster, however good they look. Architecture is a matter of common sense because it is of common use; it should be attractive to people without explanation."

Krier often points out that historical cities and buildings and traditional aesthetics "are so endearing to people generally not because of history-culture-memory, but simply for the self-evident, superior quality, their beauty, efficiency, and practicality. Civilized human intelligence is generally seduced and convinced by objects which are at once useful and aesthetic, by the harmony of shapes, colors, construction methods, and composition without any explanation and justification."

"BAD ARCHITECTURE" HAS TO DO WITH INTELLECTUAL CONFUSION, LIKE BUILDING A COTTAGE THE SIZE OF A PALACE.

Is beauty objective, as Vitruvius posited in the first century B.C.? Krier is, to say the least, voluble on the subject. "We are part of nature, and our aesthetic judgment of phenomena is relative to our position of observation. Even an architectural shame may look beautiful when observed in the setting sun and from a safe distance," he said. "So it is not a question of beauty being a subjective or objective quality, but in how far our aesthetic perception changes in relation to our point of observation, involvement with, or detachment from a phenomenon. Relativity in this sense has very little to do with arbitrariness, for given similar conditions of observation and use, an object's beauty or ugliness may well be said to be objective."

And yet, when theory comes to rest in construction, there is a certain element in Krier's work that is as much serendipity as the "conscious and voluntary." Indeed, its beauty is expected, springing from forms and memories that are enmeshed, even subconscious, yet it continues to surprise those who see it—even its architect. ■

Sources

Wood: *Universal Building Supplies*
Roofing: *Altec Roofing (lead-coated copper)*
Windows: *Central Window (aluminum)*
Doors: *Leon Krier (wood)*
Hardware: *Baldwin Hardware Corporation*
Paint: *Benjamin Moore*
Cast Stone: *Herple, Inc.*
Furniture: *Leon Krier (altar lectern and pews)*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**

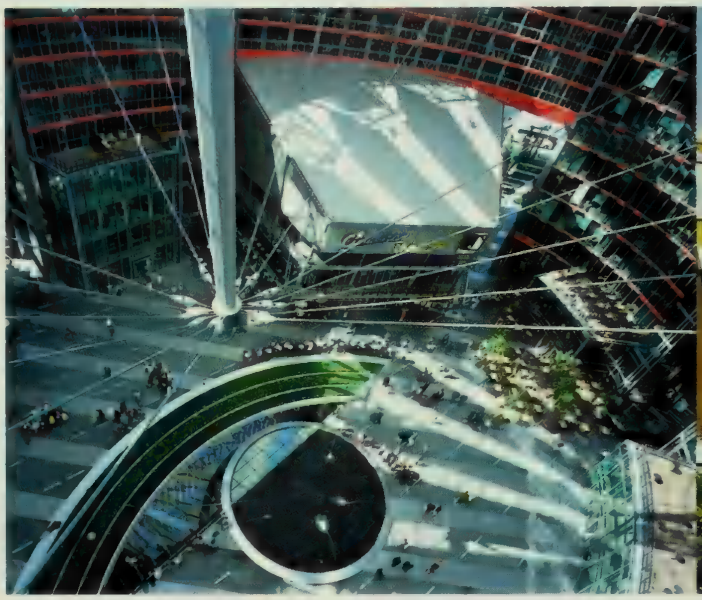


PHOTOGRAPHY: © DAN FORER



Inside, the light is almost entirely reflected; the depth of the walls turns that piercing Florida sun into a more gentle, indirect luminescence.

PUMPED-UP BEAUTY Berlin's SONY CENTER by Murphy/Jahn makes a bravura case for technology driven design at a new urban scale





By James S. Russell, AIA

Chock-a-block with the best stores, restaurants, and cafes, Berlin's Potsdamer Platz was, for a few years in the early 20th century, among the busiest and most vital urban crossroads in the world. World War II and the divided-city era snuffed out its life, leaving a scorched, empty plain rent by the Berlin Wall for decades.

In a heroic effort to recapture the energy of that lost urban era, Europe's largest private-sector development has risen on the site. It encompasses several components, but in its brashness, the Sony Center is Houstonian—an Astrodome of a place (though Houston would never *build* anything so architecturally gutsy) dropped into the new contextual gentility mandated by city planners' "critical reconstruction" ideology. Helmut Jahn, of Chicago-based architect Murphy/Jahn, has deployed every tool of architecture, engineering, and construction bravura to create a skyline-altering turn-of-the century landmark.

Sony Center, however, has not been imbued with a traditional kind of beauty. Its seven buildings and 1.3 million square feet sit in its incomplete context like a not-yet-graceful, overfed adolescent. It combines an expression of technological bravura with an enormous and salutary commitment to commercial architecture as a quintessentially public act. The mixed emotions it evokes say as much about the preconceptions that critics and architects alike bring to corporate architecture as they do about Murphy/Jahn's design.

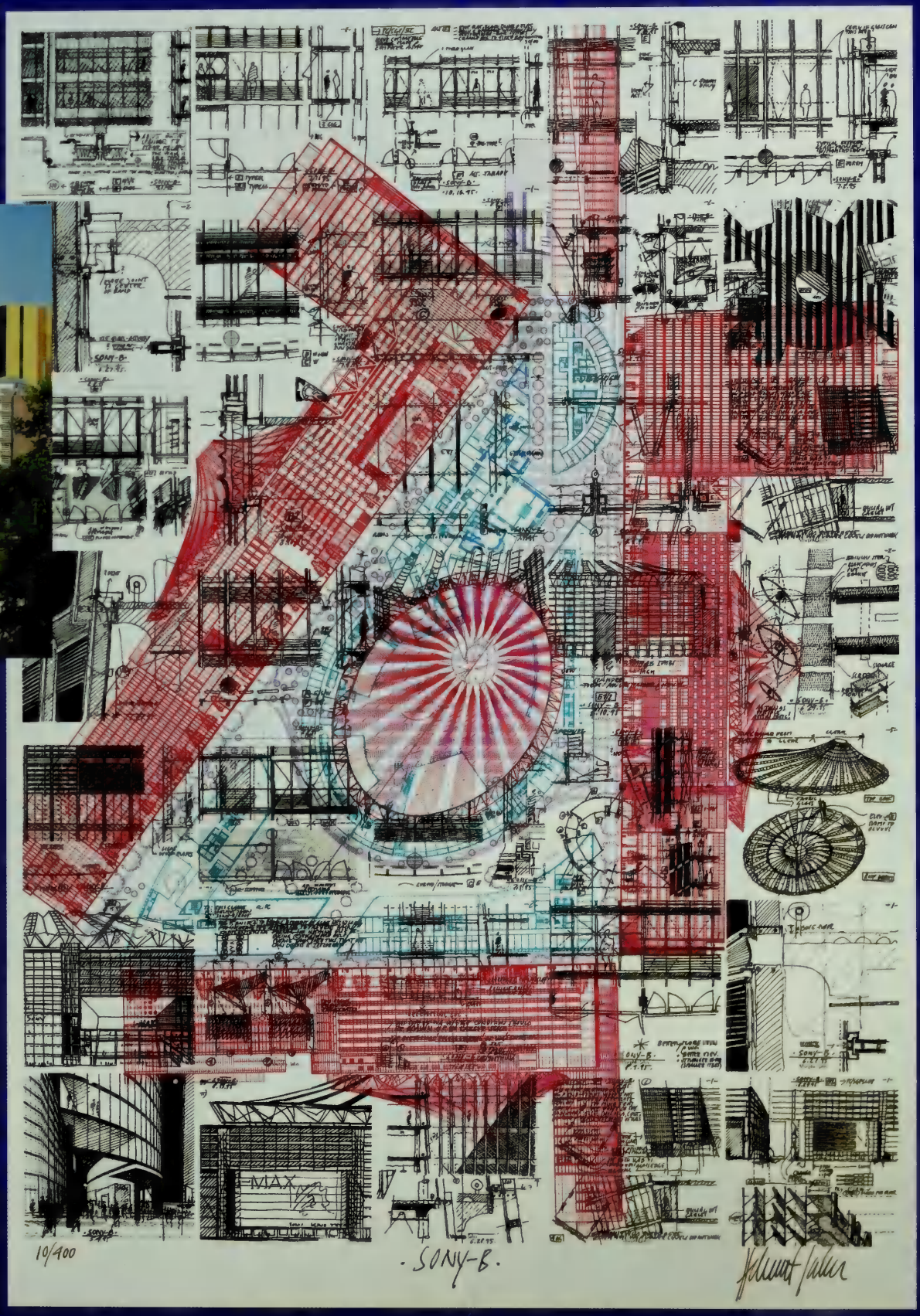
Largely discarding an urban-design scheme prepared for this site by the city not long after reunification, Jahn carved a giant oval public space out of the middle of the wedge-shaped site, calling it the Forum. He ringed it with two apartment structures, an Imax theater, and a new home for the German Film Institute (plan, page134). Aligned to the street on the site's western edge are two slablike office structures, one of which Sony occupies. Jahn punctuated the entire composition with a 25-story half-round tower that beckons to the former East.

Jahn cut monumental gateways into the long expanses of street wall, encouraging passersby to explore the smaller inner courtyards as well as the gigantic public Forum. The Forum's central fountain daringly cantilevers into a skylight, which opens onto a battery of below-grade movie theaters.

The roof of the central public space is a brawny essay in architectural engineering, thanks to the collaborative effort of the New York office of engineer Ove Arup Partnership. From a giant truss ring at the

Project: *Sony Center, Berlin*
Owner: *Sony, Tishmann Speyer Properties, Kajima*
Architect: *Murphy/Jahn—Helmut Jahn, Sam Scaccia, Phil Castillo, Dieter Zabel, Yorgo Lykourgiotis, Susan Pratt, Scott Pratt, Peter Hayes, Anthony Pelipada, Carl D'Silva, Steve Nilles, Aaron Greven, Scott Seyer (Chicago team); Steffen Duemler, Andreas Hell, Oliver Henninger, Vincent Marani, Bärbel Rudloff, Matthias Lassen, Sabine Robel (Berlin team)*
Engineers: *Ove Arup Partnership (Forum roof); BGS Ingenieursozietät (buildings); Werner Sobek Ingenieure (special structures); Jaros Baum & Bolles; Ingenieurgesellschaft Hopfner (mechanical, electrical, plumbing)*
Consultants: *Institüt für Fassadentechnik IFFT (facades); Reith + Wehner (historic structures); Peter Walker, William Johnson; Rheims + Partner (landscaping); L'Observatoire International (lighting); AIK/Yann Kersale (lighting art)*
General contractor: *Hochtief*





lmut Jahn's obsessive
dies (right) created a
ectacular public forum
posite left) topped
a tentlike roof that
lates Hans Scharoun's
ld-aluminum-clad
amber Music Hall,
signed in the late
50s (left in photo,
posite top).



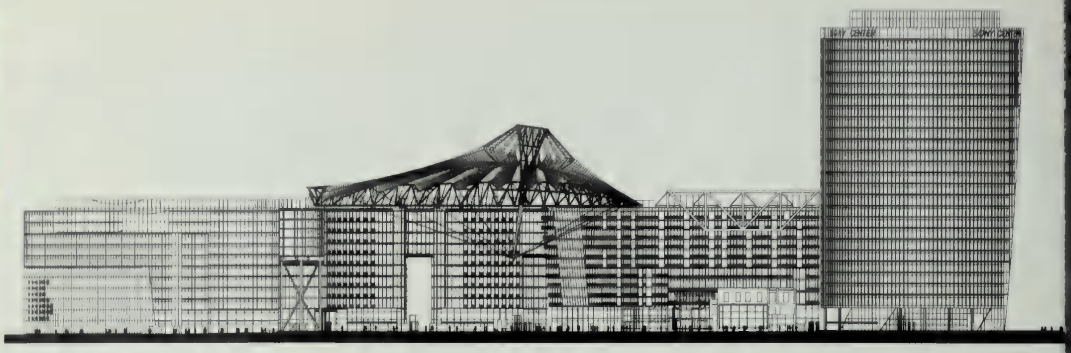


Gently curving elevations and large-scale openings to the interior (top) break down the enormous scale of the development's north-facing street wall. Werner Sobek designed the lacy supports in the upper-level atrium and street-level screen wall (left).



The festive roof of the Forum draws visitors from busy Potsdamerstrasse. Glass fins visible on the curtain wall resist wind loads





TRANSVERSE SECTION

0 100 FT. 30 M.



The tapering kingpost of the Forum roof (above) acts like the tilted axle of a bicycle wheel. Cables radiate from the top to support the fabric and glass panels, and from the bottom to hold the kingpost itself in place. They meet at the truss that rings the base (top), the equivalent of the bike-wheel rim.

base, V-shaped, sail-like panels of translucent Teflon-coated fiberglass, separated by panels of transparent glass, rise in a tilted hyperbolic cone to a smaller ring that tops a tapering kingpost.

This is an urban gesture of extraordinary chutzpah. Fed by the cinemas, stores, and cafes, the Forum is crowd-pleasing because of—not in spite of—its size and impressiveness. It's capable of being transformed by high-tech lighting effects to entertain gatherings of thousands.

But the roof does more than create a new profile on the skyline. It has been designed to temper the environment of this outdoor space, making it usable from early spring until early winter. The glass panels gently heat the space and protect it from winds in cold weather, while the fabric panels, which transmit only 17 percent of incident daylight, shade the Forum on warm summer days. This high-tech piazza is neither mechanically cooled nor heated.

The multilevel building lobbies, too, are mechanically conditioned only minimally as a creative response to Germany's strict energy-consumption regulations. In these semipublic spaces, one of which is visible as a stairway-laced void six stories in the air, Jahn has collaborated with structural engineer Werner Sobek to dematerialize their enclosure with balletic webs of rods, connectors, and through-glass fasteners.

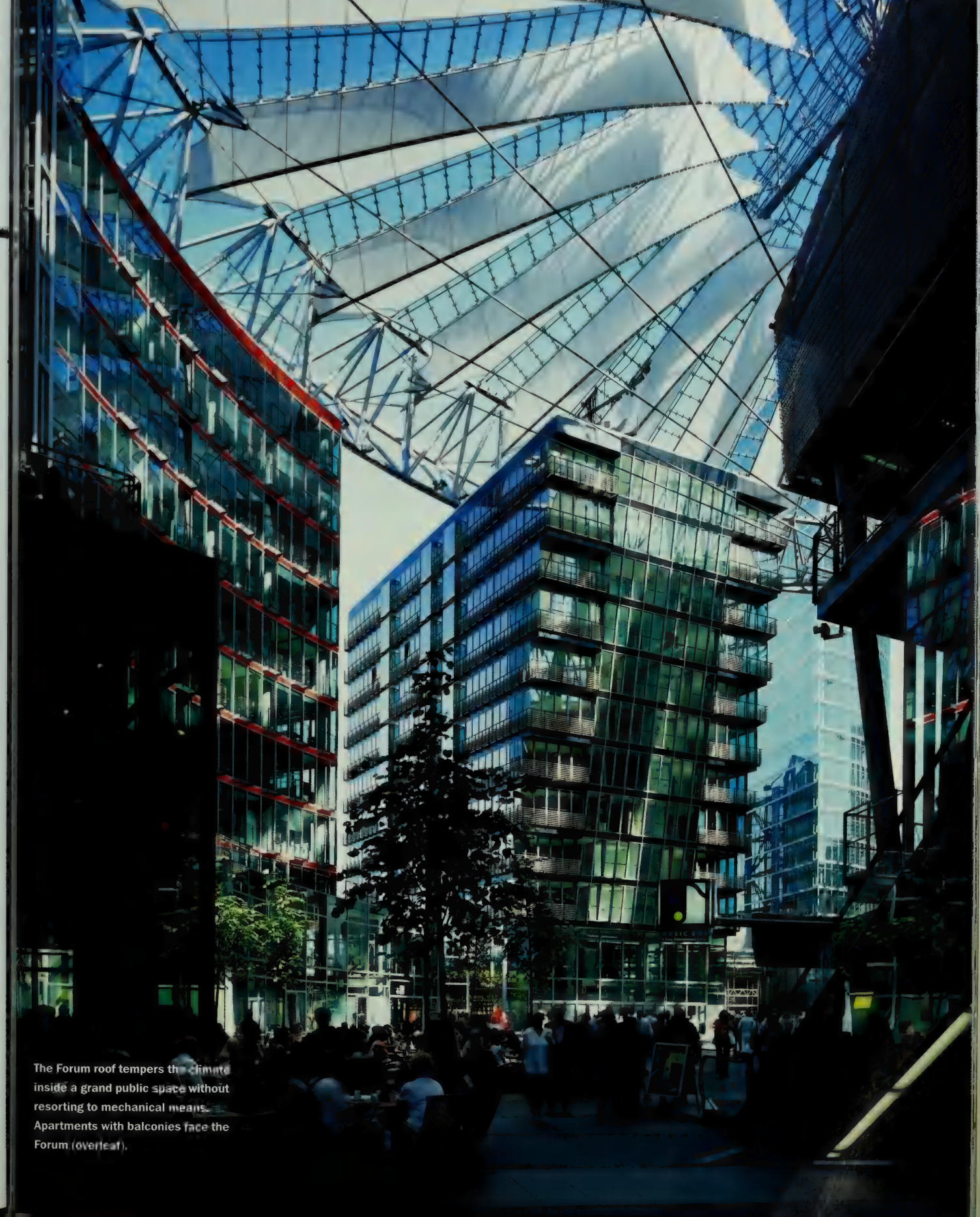
As if this weren't enough engineering exhibitionism, a giant, multistory truss carries several floors of apartments over fragments of the Esplanade Hotel, among cabaret-era Berlin's most glittering venues. The

THE FORUM ROOF'S KINGPOST—A 139-FOOT LANCE AIMED AT THE PUBLIC BELOW—DRAWS AWED STARES.

damage done during the war and the depredations of postwar neglect have been lovingly preserved and enclosed in multifloor-sized vitrines. The hotel remains are now building-scale museum objects.

In recent years Jahn has embraced the kind of technology-driven design that has served well such international architects as Norman Foster, Renzo Piano, and Richard Rogers. "We are trained to think of beauty as designed, not the result of a rational process," says Jahn. Now he works with engineers to find the most expressive ways to depict the structural forces acting on a member. The Sony Center is one of Jahn's earliest efforts in this new style, and technical means are deployed to expressive ends, from the spectacular roof to the elegant structural-glass fins that project from some parts of the curtain wall.

What is troubling is that this new turn on a high-tech theme has begun to become a new orthodoxy in Europe, with many Americans looking to emulate it. Revisiting an early Modernist idea, it attempts to legitimize ambitious architecture on the basis of how technologically advanced it can be.

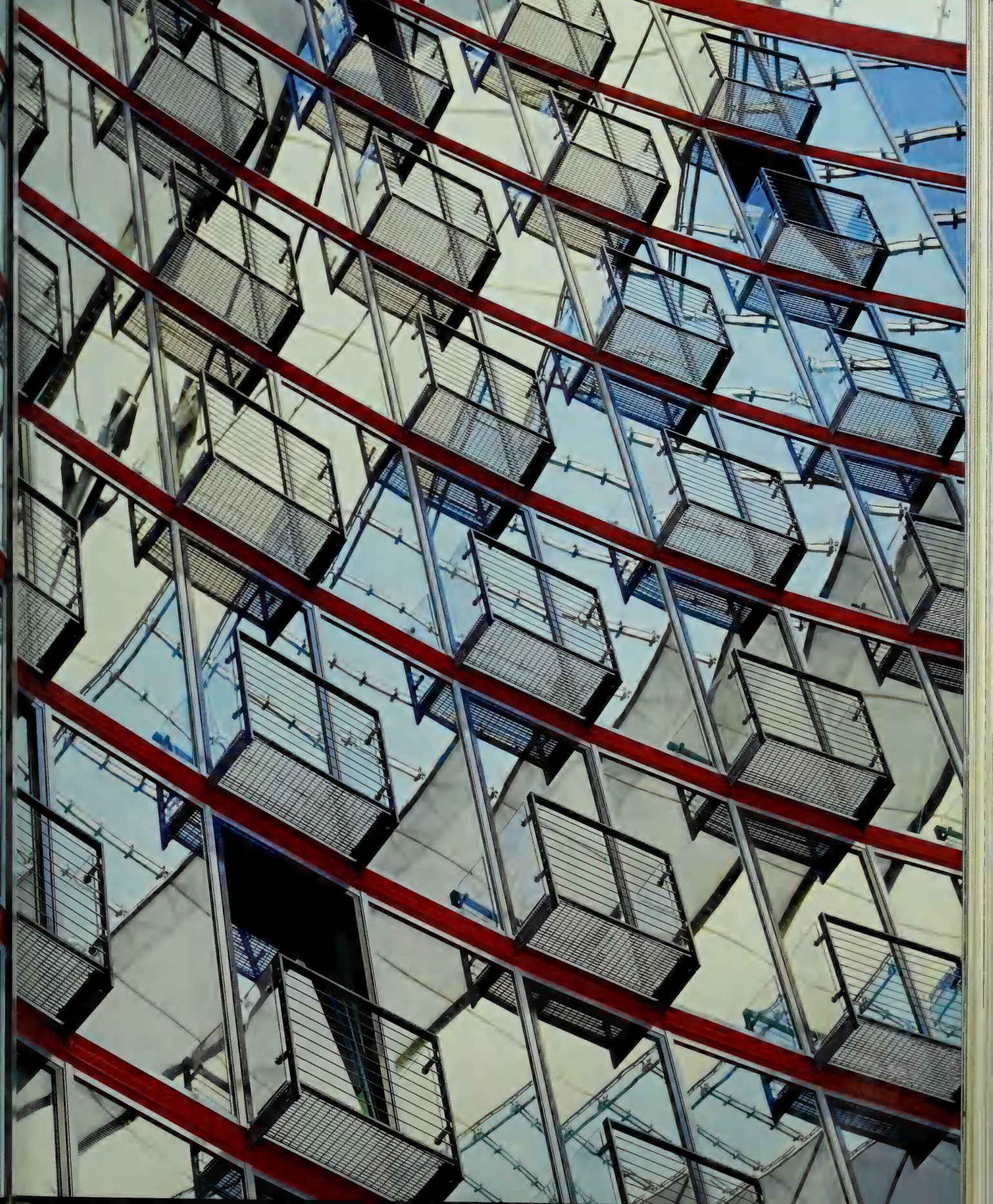


The Forum roof tempers the climate inside a grand public space without resorting to mechanical means. Apartments with balconies face the Forum (overleaf).



"SONY CENTER WILL ESTABLISH ITSELF AS A FORUM FOR A NEW KIND OF URBAN LIVING."

—HELMUT JAHN, MURPHY/JAHN ARCHITECTS





TYPICAL FLOOR PLAN

Jahn regards the results of this process as having innate beauty, but perhaps he has invested too much in this notion, at least at Sony. The Forum roof is heavier and less graceful than early drawings suggested it would be, and it sits rather awkwardly on the buildings it unites. The transition between the roof and the supporting buildings isn't clear. Because the tectonic reading of the buildings themselves is light and crystalline, they certainly don't visually suggest the heft needed to support the roof. At the portals, giant X braces emerge—they resist the huge wind loads that act on the Forum roof—but even the educated eye would not readily figure out the relationship. And the Forum roof's kingpost draws awed stares in no small part because of the menace implicit in this 139-foot-long lance aimed at the very center of the public space. Because too many elements are not anchored to the substance of the building in a synthetic way, much of the engineering bravura reads as decorative rather than tectonically authentic.

As a result, the Sony Center comes off as less resolved than its neighbor at Potsdamer Platz, the much larger Daimler-Benz redevelopment, masterminded by the Renzo Piano Building Workshop [OCTOBER 1998, pages 124]. Piano delivered sunny, suavely modern Mediterranean streets and piazzas—a tasteful Modernist's answer to the dour contextualism to be found in much of rebuilt Berlin. On the other hand, it is seemingly less calculated, less tailored. With its high-energy public space, it seems more vital.

Sony Center's gutsiness, however, deserves its due. It expresses the raw energy most cities possess in their eras of greatness. But both the Sony Center and the Daimler-Benz redevelopment, the product of extraordinary effort by architects, developers, and planners, have failed to impress the architectural cognoscenti. The projects are typically dismissed as variations of "theme park" design—a term that has become the lazy critical cant du jour.

It is true that beyond its architectural boldness, the Sony Center is filled with the comfortably familiar brand names of transnational corporations—not least of which is Sony itself. The center's architectural language of sleek, rationalized technology, polished surfaces, and crisp edges testifies to the cleanliness and well-managed order that marks it unmistakably as one of those places where the work of the emerging global marketplace gets done. Global businesses do tend to homogenize urban places in pursuit of a recognizable brand experience, or because there seems to be less risk, or because they want to stick with what's worked in the past.

It is the very familiarity of such internationalized enterprises that seems to prevent people from taking these large new projects seriously. As one critic noted, does Berlin (or any other place for that matter) really need two new Imax theaters? There is a sense that the architecture may be different, even histrionically so, but the mall-style experience is the same. The slick of inauthenticity seems to trap the architecture inside, preventing observers from reckoning with the unique sense of place the architect has created. But this is the observer's problem, not the architecture's. The real question is, can

A SLICK OF INAUTHENTICITY TRAPS ARCHITECTURE INSIDE, OBSCURING THE UNIQUE SENSE OF PLACE IT HAS MADE.

the architecture transcend the inevitably short-term tenancies? Making a real place is the prime reason for the deep degree of architectural involvement in the first place and the prime means by which a city or a development can differentiate itself. Even Sony Center will likely evolve into a livelier mix as the might-as-well-be-anywhere tenants become more diverse over time, and perhaps more closely represent Berlin's unique outlook and culture.

Certainly when commercial architecture has enriched the urban experience it has often been dismissed by critics of the time as trivial (the 1920s skyscrapers that have defined New York City's skyline image are a prime example).

But such an attitude is more problematic in an age that—in America especially—has little use for the public role architecture can play. That role is under siege in the U.S. today, when even highly successful companies only rarely build better than low-end spec norms. There's rarely a sense that commercial buildings have an obligation to add value to the urban landscape. (Consider that the selection by the *New York Times* of an architect of international stature—Piano—as designer of its new headquarters is laudable, but glaringly anomalous.)

Contrast the architectural ambition and public-spirited nature of Sony Center with the cynicism and short-term vision behind the vinyl-windowed, polymerized-stucco-over-foam-plastic streets and squares that represent the acme of commercial development in the States. In most American commercial developments, there's no truly public space at all.

Sony Center makes a place within the city that is genuinely urban, that appears to be popular, and that will last a long time. America needs to consider more deeply why it has so much difficulty creating places of comparable urban value. ■

Sources

Curtain wall: *Josef Gartner & Co.; Götz; Waagner-Biro*

Special curtain wall supporting structure: *Josef Gartner & Co.; Götz*

Glass facades: *Luxgard*

Forum roof: *Waagner Biro (fabricator); Birdair (fabric)*

Elevators: *Otis*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at:* **www.architecturalrecord.com**



Special lighting effects transform the center's vast public space. "It works well when 5,000 people gather to listen to a concert," says Jahn, "or when one person walks across it late at night."

If your employees can be three times more reliable



trademarks or trademarks of Microsoft ... United States and/or other countries.

does that mean you now have nine?



When hiring, you want employees that go the extra mile for your business. You should expect the same from your technology investments. Outfit your business with PCs preinstalled with Microsoft® Windows® 2000 Professional and Office 2000 and make the most of your time and your people. Running the 2000 generation of software from Microsoft ensures your PCs are powered by the most reliable Windows operating system. And you'll be able to do more with what you have using the world's leading productivity suite—complete with tools* specially designed to help smaller companies better manage their finances, serve their customers, and reach new markets. Choose Windows 2000 Professional and Office 2000 and watch your business multiply.

To learn more, visit **www.microsoft.com/businessdesktop**

Where do you want to go today?®

Microsoft®

What other floorcovering can offer this degree of design flexibility and durability all in one?



Unlimited Design Flexibility



Unsurpassed Durability

The use of terrazzo flooring literally goes back hundreds of years.

Why has such an art form lasted so long? Because of its unsurpassed beauty and durability.

The beauty of terrazzo is timeless. The durability outdistances most other flooring systems.

And the value of terrazzo in terms of both performance and economy is untouched!

National Terrazzo & Mosaic Association

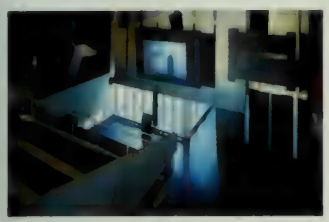
#1-800-323-9736

WWW.NTMA.COM

CIRCLE 50 ON INQUIRY CARD

Theme Sprawl

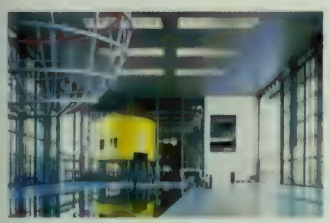
IN A WORLD WHERE EVERYTHING TRIES TO BE ENTERTAINMENT, THEMED ENVIRONMENTS ARE SPREADING OVER THE LANDSCAPE AND BRINGING TOGETHER SOME ODD COUPLES.



1.

Montreal, Quebec

Weaving together two old buildings with a sleek new structure, Saucier + Perrotte Architectes designed a cinema center with star appeal.



2.

Wolfsburg, Germany

At a sprawling new complex for Volkswagen, Munich architect Gunter Henn made picking up a car feel like a walk in the (theme) park.



3.

Point Edward, Ontario

Dunlop Farrow Architects converted an old industrial building into a waterfront casino with a modern aesthetic and great views of the river.



4.

Las Vegas

RTKL turned shopping into an exotic journey and made it a total-immersion experience. Watch out for the rainstorm.

By Clifford A. Pearson

Boundaries are disappearing everywhere—between countries in Europe, between high and low art, between the authentic and the make-believe. None of this is exactly new. After all, Walt Disney took Main Street out of the public realm and brought it into his Anaheim, Calif., theme park in 1955, and Andy Warhol appropriated commercial imagery for his paintings back in the 1960s. But the collapse in distinctions (between pop and pandering, for instance) is greater than ever before, and the result is an environmental blurring that makes museums and airports look like shopping malls, and restaurants like theme parks. Such fuzzy images of building types have the feeling of a cultural hangover after a particularly wanton night on the town. Sure, everybody's having fun. But are we going to wake up the next morning, look around, and be appalled at the person we've been in bed with?

The latest example of odd couples is the recently announced betrothal of the Guggenheim Museum to the Venetian Casino Resort in Las Vegas. If all goes as planned, gamblers will be able to walk from the roulette tables to a Rem Koolhaas–designed branch of the Guggenheim Museum starting as soon as next summer. Frank O. Gehry will design the inaugural exhibition, a remounting of the crowd-pleasing *Art of the Motorcycle* show, which he installed at the mother Guggenheim in New York City in 1998. The Vegas Guggenheim will actually be two facilities: a 7,660-square-foot "jewel box" gallery that will be a collaboration between the Guggenheim and the State Hermitage Museum of St. Petersburg, Russia, and a 63,700-square-foot exhibition hall that will have kinetic elements such as a roof that opens up.

Today art is entertainment. Thomas Hoving realized the kinship several decades ago when he organized such blockbuster shows as *The Treasures of Tutankhamen* at the Metropolitan Museum of Art in New York. Now the business world is picking up the fever, especially since Steve Wynn brought Impressionist and old-master paintings to his Bellagio Hotel and Casino in Las Vegas, turning fine art into an attraction to go along with keno, sports betting, showgirls, and upscale restaurants.

Shopping, of course, is entertainment, and so is dining, which means the architectural manifestations of these activities are becoming less snooty, more democratic. And their locations are less exclusive as well; now you can find Armani at the shopping mall and Lutèce in Las Vegas. But as the old distinctions disappear, architects must find new ways of communicating what makes a museum different from a Hallmark shop or a fine-dining establishment from a Beefsteak Charlie's.

Theming is one way developers and designers can tell users





A new branch of the Guggenheim Museum in Las Vegas will have two different facilities, a 63,700-square-foot exhibition hall that can handle large pieces of art and touring shows (left) and a smaller gallery (right) that will be a joint effort with the State Hermitage Museum.

what a project is all about. "Theming has always been around," states Scott Simpson, FAIA, a principal at the Stubbins Associates, which designed the Venetian Casino Resort and is working with Koolhaas on the Guggenheim in Vegas. "Medieval cathedrals were themed buildings," adds Simpson. "Themes can take intimidating ideas and make them accessible. They help bind us together. Without them and their sense of shared experience, we don't have a culture."

At the Venetian, Stubbins and Wimberly Allison Tong & Goo used theming as an "intermediary between the real and the fantasy," explains Simpson. Phase 1 of the enormous project includes a 3,000-room hotel, a casino, restaurants, ballrooms, and a 500,000-square-foot shopping complex with indoor canals, singing gondoliers, and make-believe Venetian streetscapes; it cost $1.6 billion. (By comparison, the Getty Center in Los Angeles was a bargain at just $1 billion.) A second hotel with 1,000 rooms is now underway and will be followed by a third one with 3,000 rooms, which will be designed by Stubbins and Gehry.

Everyone knows the Venetian's campanile, piazza, and palazzi aren't the real thing, even though the architects did a lot of research to get proportions and patterns right. "You want to be fooled," says Simpson of everyone who wanders from the slots to the mock-Rialto Bridge and willingly suspends disbelief. What people come for is an experience that engages all of their senses.

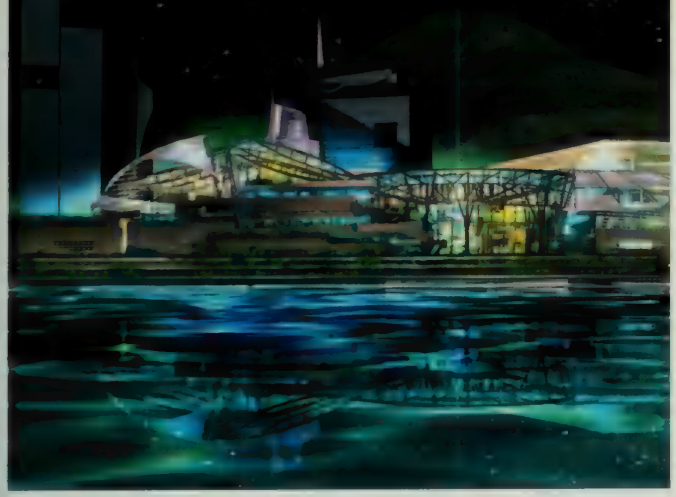
"In today's economy, there are value transactions and there are commodity transactions," says Simpson, quoting from the book that every entertainment architect seems to be quoting from right now, *The Experience Economy,* by Joseph Pine, James Gilmore, and Joseph Pine II. Companies that don't add value to their products by turning them into experiences must sell their goods or services as commodities and compete on price alone, state the book's authors. So going to the Grand Canal Shoppes at the Venetian is not just about the stores or the restaurants or the gondolas. "It's the experience, the theater," says Simpson.

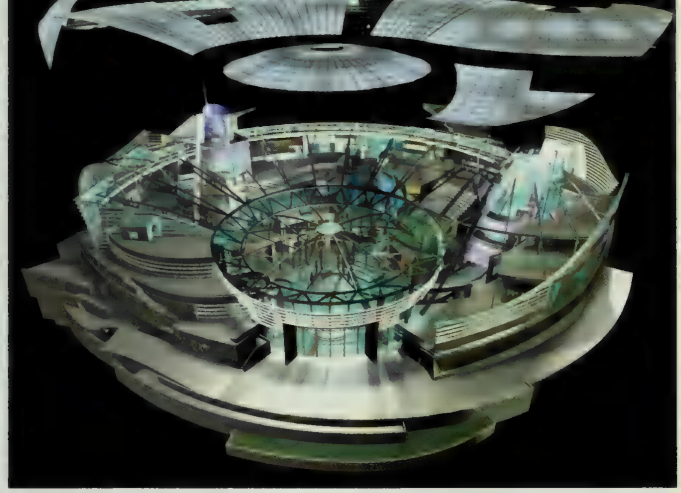
Just as a mass-market economy has been pulling down the walls that once separated the fine arts from their popular cousins and shopping from entertainment, the Internet is blurring distinctions on a global scale. "We're living in a world of convergence," states Tim Magill, vice president of the Jerde Partnership and the project designer for Cybercenter, the retail, entertainment, and exhibition component of a $2 billion development in Hong Kong called Cyberport, which is being designed by Arquitectonica. Developed by the Hong Kong government and Pacific Century CyberWorks (a company run by Richard Li, the son of Li Ka-shing, one of Hong Kong's richest men), Cyberport will try to create a "strategic cluster" of information technology and related service companies; it will include office towers, a hotel, housing, stores, restaurants, and entertainment venues. Cybercenter will be the complex's "front door and communal heart," the piece that will make the business of information fun and accessible to the public. Today, "information is both business and entertainment," says Magill.

Cybercenter is "the first project where the intent is to create a real-world complement to the virtual world," states Magill. "The spatial metaphor we're using for this project, as with much of our work, is the city. The city is a place of exchange—of ideas and goods and services." While the Hong Kong project will feature some fancy technology—such as smart cards that alert retailers to the preferences of repeat customers



No need to worry about floods damaging this piazza or this Doges' Palace, since it's in Las Vegas at the Venetian Casino Resort.

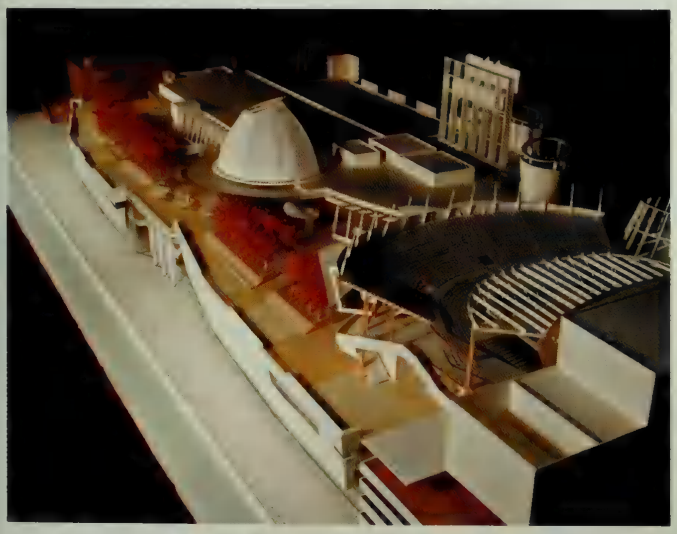




Although hooked up to the latest technology, Jerde's Cybercenter in Hong Kong (left and right) will unfold like an old hill town.

and cell phones that inform shoppers of promotions and special events—it will not try to replicate cyberspace inside a real space. Instead, it will "amplify the theatrical, impulsive, and social aspects of the real world" that can't be found on the Internet, says Magill. To that end, the Jerde Partnership is laying out the project as a hillside village stretching out along a spiraling ramp. The first phase of the overall development is scheduled to open in December 2001, while Cybercenter will be part of Phase 2 and should be completed in late 2002 or early 2003.

An ambitious mixed-use entertainment project closer to home is Penn's Landing in Philadelphia. Like Cybercenter, Penn's Landing is being developed by a public/private partnership and will include shops, restaurants, theaters, and interactive exhibits. The 1.74-million-square-foot complex, designed by Ehrenkrantz Eckstut & Kuhn Architects (EE&K) and Bower Lewis Thrower, is the latest incarnation of a project that has been proposed and then sidelined by economic downturns a number of times over the past few decades. To be built on Philadelphia's Delaware River waterfront, which had once been mostly industrial and is now becoming more integrated with the city's downtown, Penn's Landing will feature a 4,000-seat outdoor performing arts facility, a 130,000-square-foot Please Touch Museum for children, and a great central plaza, in addition to a multiplex cinema, restaurants, and stores. The $500 million project is scheduled to open in September 2002.



Ehrenkrantz Eckstut & Kuhn Architects designed Penn's Landing in Philadelphia with a mix of indoor and outdoor entertainment venues.

Even as art, shopping, cyberspace, and urban redevelopment fall under the sway of entertainment and theming, the old-fashioned theme park still exerts a powerful hold on the public imagination. In fact, the folks at Disney are adding theme parks onto theme parks, opening Disney's California Adventure (a 55-acre, $1.4 billion expansion to the original Disneyland in Anaheim) in February 2001, Tokyo DisneySea (a 175-acre addition to Tokyo Disneyland) in autumn 2001, and a new movie-themed park at Disneyland Paris in 2002. And if that weren't enough, the company is set to build a new Disneyland on Lan Tau Island in Hong Kong, to open in 2005.

Although Disney is quick to use the latest technology in its rides and attractions, the themes around which the parks are designed have not changed much since the first Disneyland opened, says Wing T. Chao, executive vice president of master planning, architecture, and design for Walt Disney Imagineering. "What attracts us today is not really different from what attracted us 50 years ago," says Chao. "You need a combination of both authenticity and fantasy," he explains. "You want to immerse people in an experience. But you want to make sure the theme isn't too loud, too much in-your-face."

At the start of the third millennium, every company seems to be reading from the Disney playbook. Everything is themed. Everything is entertainment. Everything is an experience. But entertainment and experiences tend to be fleeting affairs and get dated very quickly, which is why casinos and shopping malls undergo major face-lifts every five years or so. The short shelf life of these buildings also explains why they often look like stage sets, ready to be struck as soon as the next fad hits the market. And just as speed makes the view from a train look fuzzy, the constantly morphing nature of a world focused on experiences may lack many of the contrasts that put places and things in perspective. If everything is entertainment, will having fun be much fun anymore? ■

Cinémathèque Québécoise
Montreal

1 **SAUCIER + PERROTTE ARCHITECTES MAKES ITS GUTSY NEW CENTER FOR FILM AND VIDEO ART PART OF THE SHOW**

By Beth Kapusta

Project: *Cinémathèque Québécoise, Montreal*
Architect: *Saucier + Perrotte Architectes—Gilles Saucier, André Perrotte, Robert D'Errico, Martin Bouchard, Andrew Dunbar, Franck Thonon, Jean-François Lagacé, Lyse Lachance, Oscar Juarros, Pierre Colpron, Eric Champagne, project team*
Engineers: *Teknika Inc. (structural, mechanical/electrical); Dupras Ledoux (mechanical/electrical)*

Size: *55,000 square feet (renovated); 26,000 square feet (new)*
Cost: *$5.4 million*

Sources
Customized curtain wall and anodized-aluminum windows: *LBL*
Anodized aluminum doors: *A.D. Prevost*
Acoustical ceiling: *Armstrong*
Plastic laminate: *Nevamar*
Resilient flooring: *Forbo*
Theater chairs: *Sièges Ducharme*
Interior ambient lighting: *Lightolier*
Downlights: *Zumtobel Staff*

WWW *For more information on the people and products involved in this project, go to* ***Projects*** *at* ***www.architecturalrecord.com***

Program

As designed by Saucier + Perrotte Architectes, the Cinémathèque Québécoise is literally and figuratively a moving experience. The 81,000-square-foot cinémathèque, whose mission is to display and collect motion pictures, occupies two existing buildings in downtown Montreal and a new 26,000-square-foot structure that connects and transforms the old ones.

Taking cues from the medium to which the building is dedicated, Saucier + Perrotte wove cinematic references into the fiber of its design and accentuated the visitor's experience of moving through the building. For starters, the building itself becomes a movie screen as images from nine different sources are projected onto its grid of translucent panels facing Boulevard de Maisonneuve. In the building's main lobby, the celebration of the moving image continues with a cantilevered seating area, or "agora," floating above the entrance and facing a large projection screen.

Sheathed in glass and metal, the new portion of the complex houses the lobby, the cafe, and other functions that take advantage of daylight. The old buildings on either side of this new structure have less glazing and, as a result, offer areas where daylight can be controlled. Accordingly, the east building, originally a school, now accommodates a film theater, an exhibition gallery, a shop, and administrative offices. The third floor of this wing is rented out to multimedia companies.

The west building houses multimedia showcases on the ground floor and a "mediathèque," or film school, in the basement, where an excellent collection of Soviet films can be found. A linear court facing Rue Sanguinet helps bring daylight down to the mediathèque.



Design approach

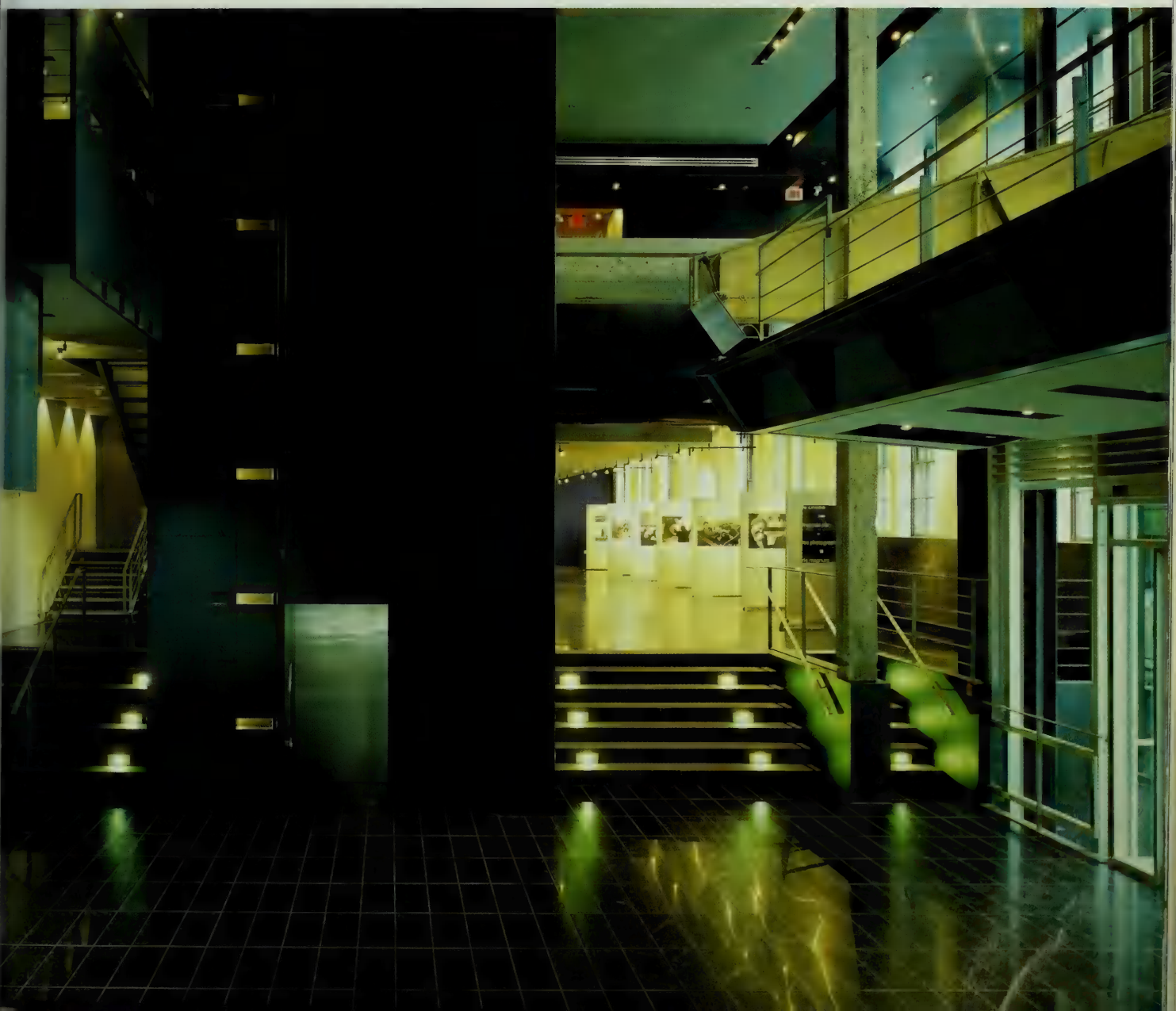
The architects designed the building as a series of episodes, a monochromatic essay in texture and material that comes alive as visitors move through it. The building's kinetic play of planes and skins seems an apt expression of what goes on inside.

The building's most fascinating membrane is its Boulevard de Maisonneuve facade, which combines transparent and translucent panes of glass and a ramped interior bridge on the second floor that lets visitors walk behind the

Toronto-based Beth Kapusta writes on architecture.

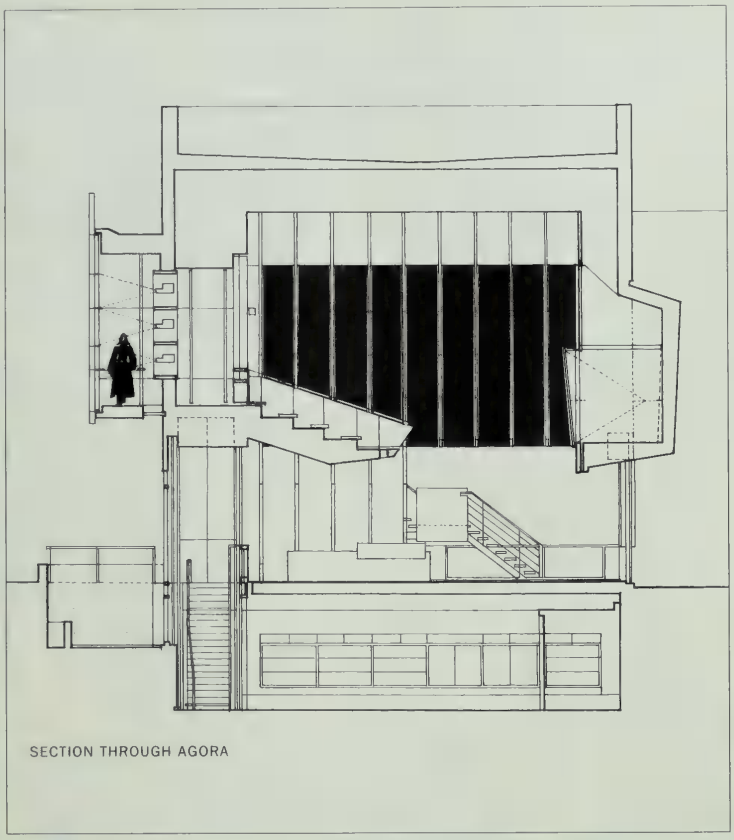


Old and new come together on the Boulevard de Maisonneuve facade (left), where video images are projected from behind on a glass grid. The main lobby (below) is an elegant essay in black-and-white architecture.









SECTION THROUGH AGORA



Cantilevered from the building's glass front and slicing into the main lobby, a seating area, or "agora," breaks with the notion that viewers must sit in a dark or neutral room (this page and opposite).



SECOND FLOOR



GROUND FLOOR

1. *Entry*
2. *Lobby*
3. *Exhibit gallery*
4. *Shop*
5. *Offices*
6. *Theater*
7. *Exhibition*
8. *Cafe*
9. *Garden*
10. *Multimedia showcases*
11. *Bridge*
12. *Suspended agora*
13. *Lounge*
14. *Photo storage*
15. *Video projection*

projection screens facing the street. Because the bridge runs between the rear projectors and the translucent-glass screen, the silhouettes of visitors appear on the outside of the building as they walk inside.

Structure

The cinémathèque's new entry pavilion is a steel-frame structure inserted between an old concrete-frame school building to the east and an existing brick building to the west. The architects restored the former school's stone exterior but gutted the interiors, exposing the concrete frame. Combining visual and structural gymnastics, the "agora," cantilevered over the main lobby, provides a counterweight to the ramped bridge and the image screen projecting from the building's front elevation.

Materials

The architects employed a monochromatic material palette that includes black granite on the lobby floor, black steel handrails, polished gray linoleum, and gradations of hot-rolled, cold-rolled, galvanized, and sandblasted stainless steel throughout the project.

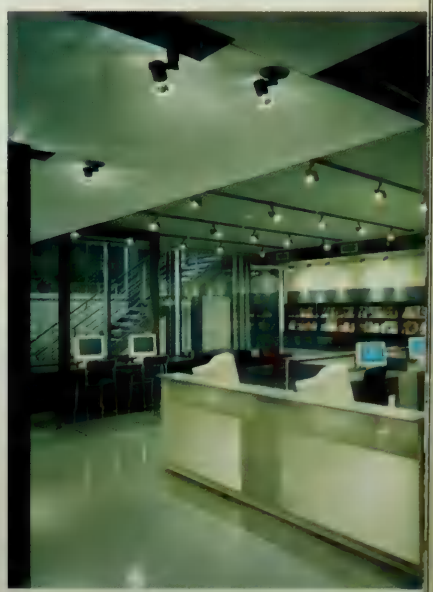
In the lobby, painted-metal panels provide splashes of color to contrast with an otherwise black-and-white-and-gray environment. Selective use of a few richly evocative materials—such as dark mahogany paneling on the projection wall in the lobby and deeply rusted Cor-ten steel in the cafe—also offers counterpoints to the overall palette.

Commentary

The cinémathèque is a superbly controlled exploration of black-and-white architecture. Like cinematographers, Saucier + Perrotte uses light, transparency, and movement to create an almost dreamlike sense of montage and even voyeurism. The center has already become a popular fixture in a part of downtown Montreal that is evolving into an important cultural district. ■

A cafe (above) gives direct access to a small courtyard tucked between the new building and an existing brick structure. The complex includes a variety of spaces for watching films and videos (right) and conducting research (far right).





Autostadt
Wolfsburg, Germany

2 **GUNTER HENN'S CORPORATE THEME PARK FOR VOLKSWAGEN ENGAGES MODERN ARCHITECTURE TO CELEBRATE THE REALM OF PRODUCT BRANDING**

By Claudine Weber-Hof

Project: *Autostadt Wolfsburg, Germany*
Client: *Volkswagen AG*
Architect: *HENN Architekten Ingenieure—Gunter Henn, principal*
Engineers: *Dröge Baade and Partner (civil/KonzernForum); HL-Technik AG (mechanical/KonzernForum); Bendorf and Partner (civil/ZeitHaus); Jaeger, Mornhinweg and Partner, IB Müller and Bleher, Filderstadt (mechanical/ZeitHaus)*
Consultants: *Jack Rouse Associates (corporate brand identity); United Designers, Vigile and Stone, Tony Chi, Jordan Mozer (interior design)*
General contractor: *Hochtief AG (KonzernForum and ZeitHaus)*

Size: *62 acres*
Cost: *$378 million*

Sources
Glass curtain wall (KonzernForum): *VOEST Alpine*
Steel and aluminum windows (KonzernForum): *Pagitz*
Pivoting glass doors (KonzernForum): *Sommer GmbH*
Interior ambient lighting (KonzernForum): *KÖHL GmbH*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at* **www.architecturalrecord.com**

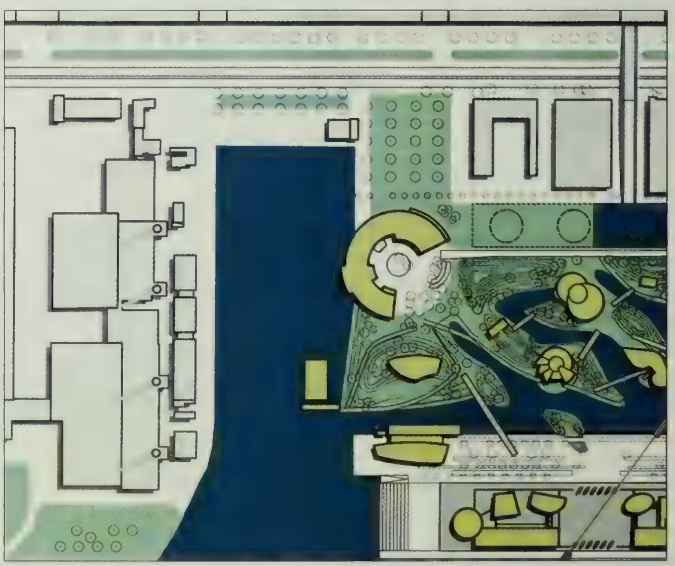
Program

In 1994 Ferdinand Piëch, the chairman of Volkswagen, dreamed up the idea of an "infotainment" theme park celebrating the automobile, and he pegged its opening to that of Expo 2000 in nearby Hannover. Six years later, the 62-acre, $378 million complex, christened Autostadt (Car City), stands in VW's hometown of Wolfsburg as the auto giant's very own world's fair, with pavilions dedicated to the company's various car brands, a visitors' center, museum, restaurants, and shops.

VW directed Autostadt's architect, Gunter Henn, to "emotionalize" its disparate products by capturing the customer's brand-buying experience in architectural form, says marketing and sales director Robert Bücheldorfer.

The site, a former fuel depot bounded on two sides by VW's factory buildings, lies between the city center and Castle Wolfsburg. The large tract of land and its proximity to downtown Wolfsburg offered the planners a chance to design the complex as a new urban quarter. Construction began in May 1998, with Henn directing 400 architects who worked at breakneck speed. The complex opened right on time, at the end of May. As built, the park can accommodate up to 1.5 million visitors each year, about half of whom will come to take delivery of new cars built at the nearby VW factory.

Claudine Weber-Hof, a journalist and architectural historian, lives in Munich.



1. *KonzernForum*
2. *Service house*
3. *ZeitHaus*
4. *Bentley pavilion*
5. *Skoda pavilion*
6. *Lamborghini pavilion*
7. *Audi pavilion*
8. *VW pavilion*
9. *KundenCenter*
10. *Auto tower*
11. *Hotel*

Design solution

Envisioning Autostadt as a city within a city, Henn extended an existing urban axis, Porschestrasse, northeast from Wolfsburg through the site to Castle Wolfsburg. Visitors arriving by train cross a pedestrian bridge spanning the Mittelland Canal; those arriving by car can park east of Autostadt and walk around its southern periphery.

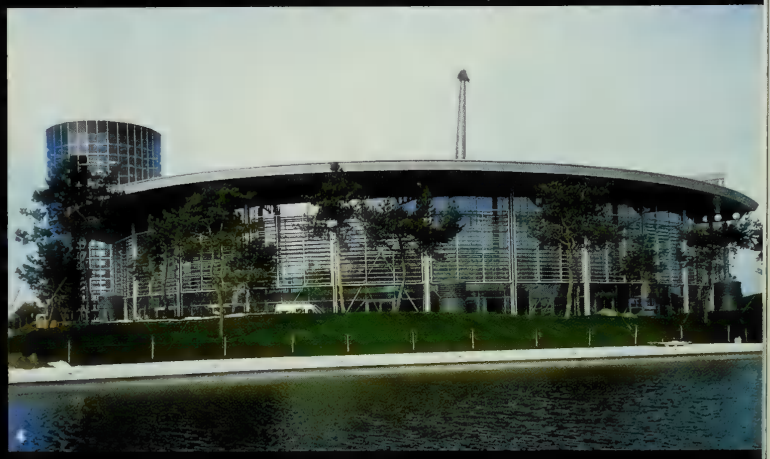
A 660-foot-long building called the KonzernForum (Company Forum) is a visitors' center and gateway; it also divides Autostadt into two zones. The ZeitHaus (a car museum) and the Ritz-Carlton Hotel comprise the core of an entertainment area, while the glazed AutoTürme (Auto Towers) and the KundenCenter (Customer Center) cater to customers who have come to pick up their cars. Scattered between these two zones, like toys on a lawn, are seven pavilions representing different VW brands.

The KonzernForum is where people start their visit to Autostadt. Two sets of six 60-foot-high glass











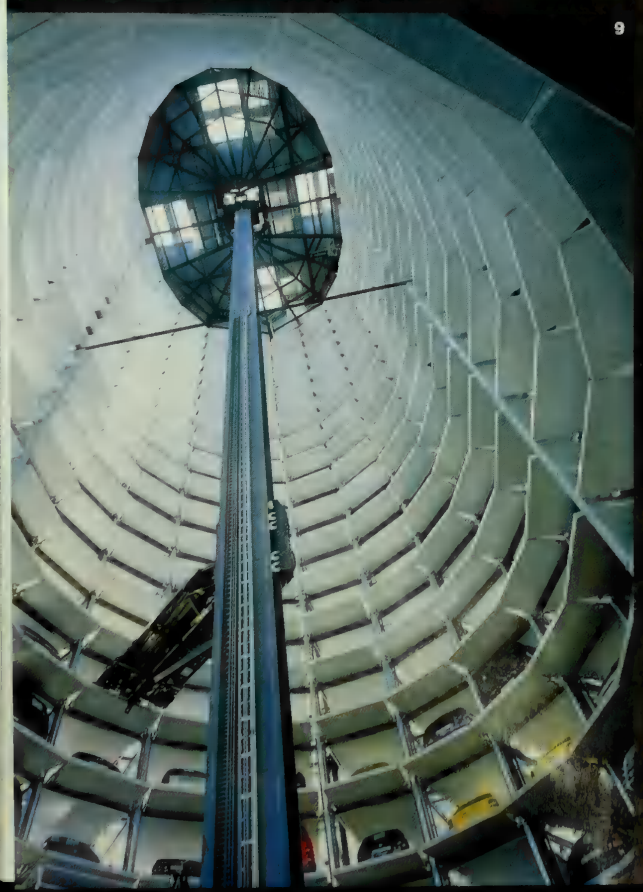




1. View of Autostadt, with some of the brand pavilions and the twin Auto Towers 2. The Lamborghini pavilion has a car that flips inside during multimedia presentations 3. The Audi pavilion is one of seven brand pavilions 4. The KundenCenter is a service center for car buyers 5. The Seat pavilion. Visitors cross a bridge to get to the Seat pavilion 6. The Volkswagen pavilion features an innovative 360-degree theater inside a double-glazed cube 7. The Volkswagen Nutzfahrzeuge pavilion engages land and water.

Autostadt. The two Auto Towers are each 158 feet high and can hold up to 400 cars. A computer-controlled system moves cars from the factory floor through underground tunnels and onto a 20-story lift. Customers can watch as their cars are retrieved from their spots in the tower and brought to the KundenCenter.





doors on the building's north and south facades open and close like vertical blinds to provide natural ventilation and access to a central indoor "piazza." This 27,000-square-foot space is a staging ground, orienting the public to the park's various attractions. In the KonzernForum, freestanding structures—one red, one blue, and one yellow—set on aluminum-clad columns house a customer service center for new car owners and two theaters.

In the KonzernForum, visitors can also explore two floors of interactive presentations and walk through a giant car engine designed by Jordan Mozer. This "welcome center" atmosphere extends to the ZeitHaus, a museum divided into two wings—one transparent, one opaque. The glass-box portion works as a showcase, displaying history-making cars from a variety of manufacturers. Its mate is a windowless exhibition hall that places the car in its social and cultural context. Bridges keep the visitor moving back and forth between the "rational" showcase and the "associative" exhibition hall, an arrangement Henn calls "neural architecture" because the two parts are bound like halves of a brain.

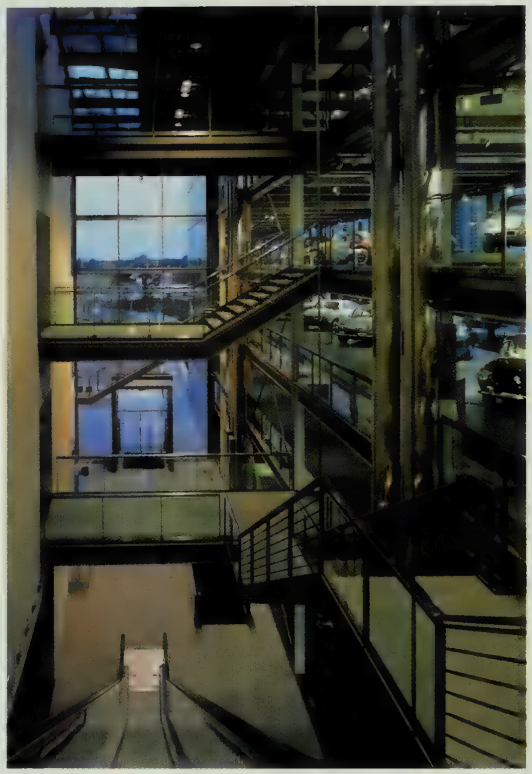
Autostadt's marketplace experience shifts into high gear in the brand pavilions, nestled into a hilly landscape. The choices—Bentley, Skoda, Audi, Lamborghini, Seat, VW, and VW utility vehicles—loom before visitors like an automotive wonderland. The pavilions have strikingly distinct identities, and Henn's firm had to find forms to fit the brand impressions VW wanted each to convey. Working from the inside out, the client developed a multimedia show for each pavilion and only then let the architects design the building's shell. "We didn't even think in terms of buildings at first," says Henn. "When a customer decides to buy a car, it's an emotional decision. You don't just buy a product, you buy the experience of a product, such as luxury, freedom, or speed. For us, it was all about giving form to an experience."

Of the pavilions, Lamborghini's is the least subtle but perhaps the most effective, featuring a car mounted on a wall that flips indoors



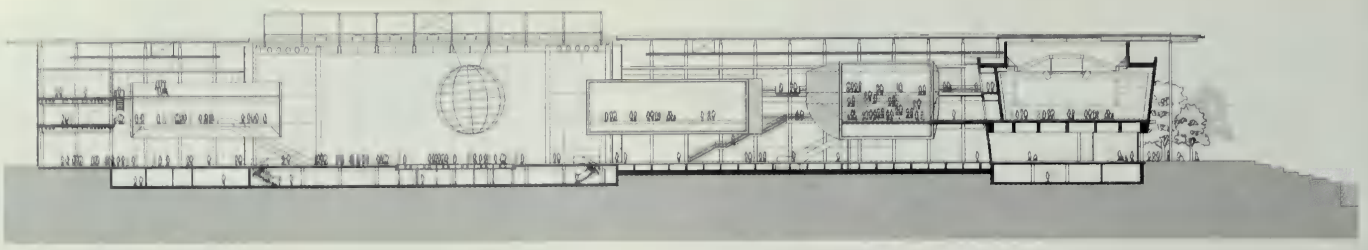






The ZeitHaus (this page and opposite bottom) is a car museum with a split personality: The glass-box portion displays history-making cars from many different manufacturers, while the more opaque wing places cars in their cultural context.





SECTION THROUGH KONZERNFORUM



The KonzernForum (this page and opposite) is a visitors' center with interactive presentations on automotive technology and a walk-through engine for children.





and out like a loose manhole cover. For the VW pavilion, the architects used simple geometric forms to express the "mother" brand's timelessness. A sphere 60 feet in diameter set within a glazed cube houses a 360-degree theater.

The pavilion circuit ends at the KundenCenter and AutoTürme, where customers pick up their new cars. The elliptical KundenCenter has a roof suspended from steel cables strung from a solitary angled pylon. The building's curving glass walls expose the "process" or function within, explains Henn.

This show-all approach applies to the automated glass-and-steel AutoTürme. Two central lifts place as many as 400 cars onto individual, reinforced-concrete parking spaces in each 20-story tower. Every 40 seconds a new car, rolling out of the factory and through subterranean tunnels, is deposited in a tower. Simultaneously, another car is lifted out and sent down to the KundenCenter. The new owner observes each step of the delivery process from behind the KundenCenter's glass walls, transforming a once-mundane activity into a high-tech event. Plans call for four more 158-foot-high towers.

Commentary

Instead of seeking a uniform corporate architecture, Henn capitalized on VW's diversity to create an *Erlebnispark*, or event park. He used an architecture of "structure and event," with large buildings providing orientation and service and pavilions serving as "happenings." At Autostadt, the automaker's philosophy is ubiquitous without being pushy, showing that VW has mastered the art of the soft sell. ■



Sixty-foot-high pivoting glass doors on the north and south facades of the KonzernForum help turn the building's central portion into an indoor piazza.

Point Edward Charity Casino
Point Edward, Ontario

3

DUNLOP FARROW BRINGS A TOUCH OF CLASS TO A MUCH-MALIGNED BUILDING TYPE BY USING A RESTRAINED PALETTE OF MODERN MATERIALS

By Beth Kapusta

Project: *Point Edward Charity Casino, Point Edward, Ontario*
Owner: *Ontario Lottery and Gaming Corporation*
Architect: *Dunlop Farrow Architects—David Morgan, project principal; Michael Moxam, Assoc. AIA, design principal; Diego Morettin, project architect; Eugene Chumakov, Craig Applegath, Scott Barker, Inge Laurson, David Gilchrist, Lui Vercillo, David Pinkney, Stephen King, Gene Ascenzi, Glen Edwards, George Simionopoulos, project team*
Engineers: *Yolles Partnership (structural); Smith & Andersen (mechanical); Carinci Burt Rogers (electrical); BKL Engineering (civil)*
Consultants: *Rick Hopkins & Co. (theming); Interior Design Collaborative (interiors)*

Size: *73,000 square feet*
Construction cost: *$44 million*

Sources
Metal cladding: *VICWEST; installed by Gage Metal Cladding*
Curtain wall: *Ferguson Glass*
Mesh ceiling: *Custom by PM Designs*
Bar/restaurant furniture: *AMAT*
Carpet: *Custom by Ulster Carpet*

WWW *For more information on the people and products involved in this project, go to* ***Projects*** *at* ***www.architecturalrecord.com***

Program

The casino is arguably the most kitsch of entertainment buildings, usually a tacky shell for making money that simultaneously draws people in, suppresses their awareness of their surroundings, and, for as long as possible, keeps them plowing tokens into one-armed machines. All the while, hidden cameras watch every action for signs of cheating, adding a touch of paranoia to a place outwardly dedicated to "fun." It's not the type of building that normally encourages serious architecture. Yet the designers at Toronto-based Dunlop Farrow Architects managed to make the 73,000-square-foot Point Edward Casino an architecturally satisfying building, although the deck was stacked against them.

Contained within a 100-foot-wide, 700-foot-long shed, the casino features a gaming room with 450 slot machines, 36 gaming tables, and a stingray-shaped bar. The more secretive security areas occupy the southernmost 2,200 square feet of the building, including money-handling areas, surveillance equipment, an administrative office, and an on-site police station.

Design approach

Located at the edge of the St. Clair River near Port Huron, Ontario, the casino uses the bones of an old railway freight building and terminal where ships were loaded in the

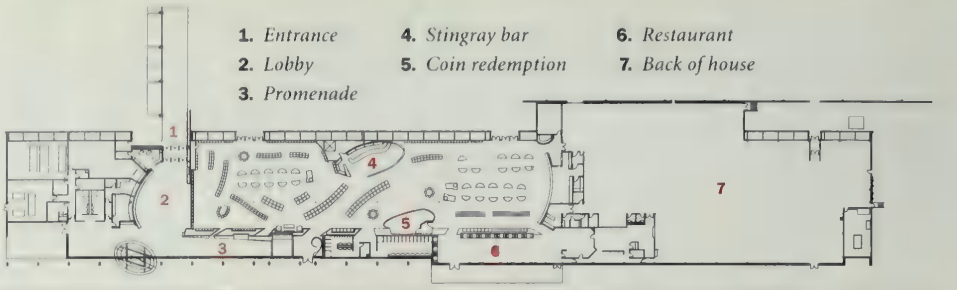






Water slides over a wall in the long promenade leading to the gaming hall (this page). The casino juts into the St. Clair River, where a freight building once stood (opposite).





FLOOR PLAN





1940s. After stripping the old building to its steel-column-and-open- web-steel-joist structure, the architects wrapped it with a sleek new metal skin. Because the old building sits closer to the water's edge than would be allowed today, renovating it—instead of starting from scratch—allowed the casino to establish a more direct relationship with the waterfront.

Dunlop Farrow employed a marine-industrial theme in its design, creating a sleek, enclosed promenade on the land side of the new building; reminiscent of old railway cars, the building also features nautical banners and flags on the water side. Punctuating the mostly horizontal composition is a 150-foot-tall elliptical tower, loosely inspired by a ship's funnel, that declares CASINO in big red letters and sends skyward a single beam of white light. A 70-foot-long steel-and-glass canopy, suspended from tall steel masts leads visitors into the building.

Structure

The original building's powerful roof structure is formed by two overlapping wings framed in steel trusses 12½ feet on center and supported by riveted-steel H-section columns. Having stripped the building to this structural frame, Dunlop Farrow wrapped the inland side with a taut skin of silver metal that envelops the deliberately darkened gaming rooms, where all clues of the passage of time are banished.

Materials

Throughout the project, the architects experimented with materials, such as triangular acrylic panels in the ceiling of the stingray bar, fish-scale-incised acrylic panels on the coin-redemption wall, and a 14,000-pound wooden-ship form hanging from the ceiling of the restaurant.

In the gaming hall, the architects designed a ceiling enlivened by more than 2,000 metal-mesh panels in six different shapes and three sizes. Layered three deep, the panels seem to float between the suspended lighting and sprinkler grid and the exposed steel roof.

For the waterfall wall running the length of the indoor promenade, the architects specified cold-rolled steel blowtorched to give it the feeling of a ship's distressed hull. In the rest rooms, floors are sea-green terrazzo, and tiled walls sport starfish-shaped mirrors.

Nearly 60 percent of the $44 million building budget was spent on the building's mechanical, electrical, and surveillance systems. The casino also boasts a computer-controlled theatrical sound and lighting system, using chrome globe house lights, halogens that downlight playing tables, and a series of luminous inflated acrylic sea animals. On the exterior of the building, a series of programmed fiber-optic lighting "pins" animates the river elevation.

Commentary

Compared with the piles of architectural excess in places like Las Vegas and Biloxi, Miss., the Point Edward Casino is a refreshing example of good design that entertains without condescending to its customers. Unfortunately, though, the client's irrepressible attraction to bad taste is starting to compromise the building: for example, a tacky wave mural was painted on a wall masking mechanical systems. ■



A modern sea theme for the casino interiors led to a stingray-shaped bar (this page), a restaurant with a ceiling reminiscent of a ship's hull (opposite, bottom), and inflatable lamps in the shape of starfish, sea urchins, and sea anemone (opposite, top).

Desert Passage
Las Vegas

4 **RTKL ASSOCIATES CHOREOGRAPHS A COLORFUL JOURNEY THAT TAKES SHOPPERS FROM THE LAS VEGAS STRIP TO AN ERSATZ ARABIA**

By Clifford A. Pearson

Project: *Desert Passage, Las Vegas*
Developer: *TrizecHahn Development Corporation*
Architect: *RTKL Associates—Paul Jacob III, AIA, vice president in charge; David Brotman, FAIA, vice president of management; Katie Sprague, vice president of graphics; Marla Nadolney, Tracy Luebbers, Mark DeMarta, Kevin Horn, Rodel Manalang, Al Diaz, Michael Arias, Yoon Chang, Elaine Chien, Faustino Ducut, AIA, Steve Kyle, AIA, Wendy Lin, Darrell Nilles, Erico Rosa, Young Yi, Anthony Hsu, Xavier Garaud, Amy Haupl, project team*
Thematic design-build architect of record: *David L. Downey*
Lighting: *Joe Kaplan Architectural Lighting*
Thematic contractor: *Keenan Hopkins Suder and Stowell (KHS&S)*

Sources
Glazing: *Downey Glass Corp.*
Plastic laminate: *Wilsonart*
Decorative floor tile: *Artisan Workshop*
Murals: *Artist's Guild*
Water features: *Hansen Mechanical Contractors*
Decorative glass: *Savoy Studios*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at* **www.architecturalrecord.com**

Program

In the high-stakes world of Las Vegas retailing, the ante is raised with each new project. When the Forum Shops at Caesars opened in 1992 with moving, talking statues of ancient Roman figures and changing skies projected onto vaulted ceilings, the 500,000-square-foot mall set a new standard for bringing razzmatazz to retail. In May 1999, the Grand Canal Shoppes at the Venetian Hotel challenged the old leader with a quarter mile of mock Venetian streetscapes and a 1,200-foot-long indoor canal complete with working gondolas and singing gondoliers. In August of this year, it was Desert Passage's turn to yell "Top this!" Like its two main competitors, Desert Passage offers about half a million square feet of stores, restaurants, and ersatz experiences, conveniently attached to a mega hotel and casino—in this case, the 2,600-room Aladdin.

Design approach

Although the Aladdin theme was a given, the architects could have taken it in different directions, says Paul Jacob III, AIA, the RTKL Associates vice president in charge of the project. "Either you go with the fantasy of the Aladdin tales or you try to put people in the lands where these stories take place," explains Jacob. RTKL took the latter approach, researching the design traditions and architecture of the Arab world and then creating a "journey" from Morocco to the Arabian peninsula and Mogul India. At first, Jacob wanted to design the two main entrances as period train stations to emphasize the notions of departure and arrival. Although this scheme wasn't accepted by the client, the journey concept was. "The journey is choreographed, so the complex isn't dependent on just facades but on a whole experience," says Jacob.

Starting at Morocco Gate, facing Las Vegas Boulevard ("the Strip") at the north end of the project, visitors take a mile-long walk along winding streetscapes and through mock buildings. The architects combined "outdoor" settings, such as a harbor where a 155-foot-long ship is docked, with "indoor" spaces that





1. *Casino*
2. *Morocco gate*
3. *India gate*
4. *Hall of Lamps*
5. *Harbor*
6. *Medina*
7. *Sultan's Palace*
8. *Lost City*
9. *Theater*
10. *Parking*
11. *Las Vegas Boulevard*

MAIN FLOOR PLAN



The Lost City (this page and opposite) rises 75 feet and is the most visually complex part of the mall. Concrete floors and plaster walls were painted and treated to mimic hundreds of different materials.

evoke a sultan's palace or the Great Mosque of Córdoba. Jacob says his team researched not just architectural forms and proportions, but the colors, textures, sounds, and smells of the different stops along ancient trade routes. "We wanted to capture not only the architectural experience of these places, but the people experience."

Because 500,000 square feet of retail with 130 shops and 14 restaurants could be overwhelming, Jacob's team broke down the mall into distinct places and emphasized the transitions between them. "To make the transitions memorable," says Jacob, "we moved people from a space that's 20 feet tall and 20 feet wide to one that's 50 feet tall and 50 feet wide."

The combination of research and razzle-dazzle is deliberate, says Jacob. "There's a dialogue between reality and theming."

Structure/materials

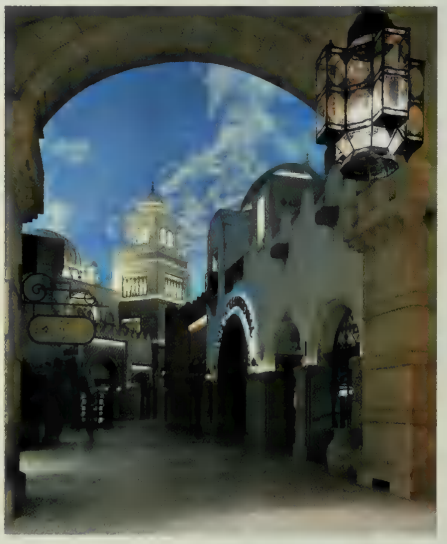
The retail complex and its parent hotel are both steel-frame structures built at the same time, while a 7,000-seat theater at the center of the shopping mall is a renovated holdover from the old Aladdin complex, which was razed in 1998.

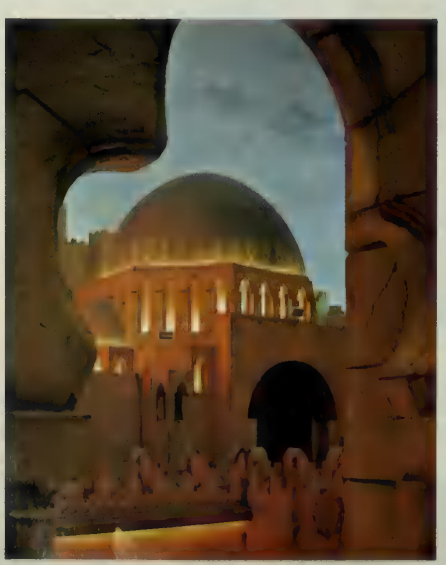
For Desert Passage, the architects mixed real materials, such as mosaic tiles and custom ironwork, with painted and textured plaster. Each themed area features its own palette of materials, lighting, and textures, and includes items such as lamps, tiles, or furnishings imported from the countries evoked in the project. Special effects—including soundtracks and even a "rainstorm" at the harbor—help create a variety of different moods.

Commentary

"In the retail world, everything's up for grabs," says Jacob, referring to the impact of the Internet and the weakened appeal of old-fashioned shopping centers. So the malls that do get built today have to immerse shoppers in new experiences. The $300 million Desert Passage delivers a commercialized version of the exotic, but it's a fun trip to take that never gets corny. As Paul Beirnes, the project's director of marketing, says, "It's a quantum leap in combining retailing and theme park." ■









The harbor (top) evokes the seaport of Tangier and includes a ship's hull. Every half hour a "rainstorm" erupts here, sending streams of water from the ceiling into a rectangular fountain. Roving musicians, dancers, and performers add to the atmospherics. To heighten shoppers' sense of being on a journey, different lighting effects (this page) and soundtracks were used in each of the major areas of the mall.

You're one click away from constructing the future.



e-Builder™

2424 North Federal Highway • Suite 316 • Boca Raton, Florida 33431 • www.e-Builder.net

1-800-580-9322 CIRCLE 51 ON INQUIRY CARD

© 2000 e-Builder, Inc. All rights reserved.


NO, ROME WASN'T BUILT IN A DAY.
[WITH THIS MACHINE, IT COULD TAKE TWO.]
DELL
intel inside
pentium® III



Flat Panel Monitor Sold as an Upgrade.

Empires come and go. And, what once was possible in months, is now required in days, or even hours. Not to worry. Because here's a workstation that can leap killer deadlines faster than you can say "Centurion." The Dell™ Precision™ workstation's RDRAM technology and dual processor capability provides architects and engineers the bandwidth and refresh rate to perfect their designs quickly—even up to the last minute. And a full range of industry-leading graphics cards delivers impressive 2D and 3D performance that breathes digital life into your creations. Just think of what those early architectural visionaries might have accomplished if they had a workstation like this.

DELL™ WORKSTATIONS:

DELL™ PRECISION™ 220

- Intel® Pentium® III Processor at 800MHz (up to 1GHz)
- Dual Processor/RAID Capable
- 64MB RDRAM (up to 512MB)
- 10.2GB[5] 7200 RPM EIDE HD (up to 73.4GB[5] 10,000 RPM SCSI)
- 32MB NVIDIA TNT2 M64 4X AGP Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$1399 E•VALUE CODE 89536-491113

BUSINESS LEASE: $39/MO., 48 MOS.[11]

ASK ABOUT OUR AIA DISCOUNT

DELL™ PRECISION™ 420

- Intel® Pentium® III Processor at 800MHz (up to 1GHz)
- Dual Processor/RAID Capable
- 128MB RDRAM (up to 1GB)
- 20GB[5] 7200 RPM EIDE HD (up to 73.4GB[5] 10,000 RPM SCSI)
- 32MB 4X AGP Matrox G400 Max Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$1799 E•VALUE CODE 89536-491117

BUSINESS LEASE: $50/MO., 48 MOS.[11]

ASK ABOUT OUR AIA DISCOUNT

DELL™ PRECISION™ 620

- Intel® Pentium® III Xeon™ Processor at 866MHz (up to 1GHz)
- Dual Processor/RAID Capable
- 128MB ECC RDRAM (up to 2GB)
- 9GB[5] 10K RPM Ultra3 SCSI HD (up to 73.4GB[5] 10,000 RPM SCSI)
- 32MB Diamond® Viper V770D Graphics Card
- Integrated NIC & Sound; 48X Max CD-ROM
- MS® Windows® 2000 Professional
- 3-Yr NBD On-site Service[3]
- 7x24 Dedicated Workstation Phone Tech Support

$2999 E•VALUE CODE 89536-491129

BUSINESS LEASE: $83/MO., 48 MOS.[11]

ASK ABOUT OUR AIA DISCOUNT

SYSTEM UPGRADES

Graphics Cards:
- 32MB 4X AGP NVIDIA TNT2 M64
- 32MB 4X AGP NVIDIA GeForce2 GTS
- 64MB 4X AGP GLoria® II Pro (420 & 620 only)
- IEEE 1394 Adapter Card

Monitors:
- 19" (17.9" vis) P991 FD Trinitron® Monitor
- 21" (19.8" vis) P1110 FD Trinitron® Monitor
- 15" (15.0" vis) FP1501 Flat Panel Monitor

Operating Systems:
- MS® Windows® 2000 Professional
- NEW Red Hat® Linux™ 7.0

DELL.COM™

USE THE E-VALUE CODE TO GET EXACTLY WHAT YOU WANT | **800.873.3719** | WWW.DELL.COM

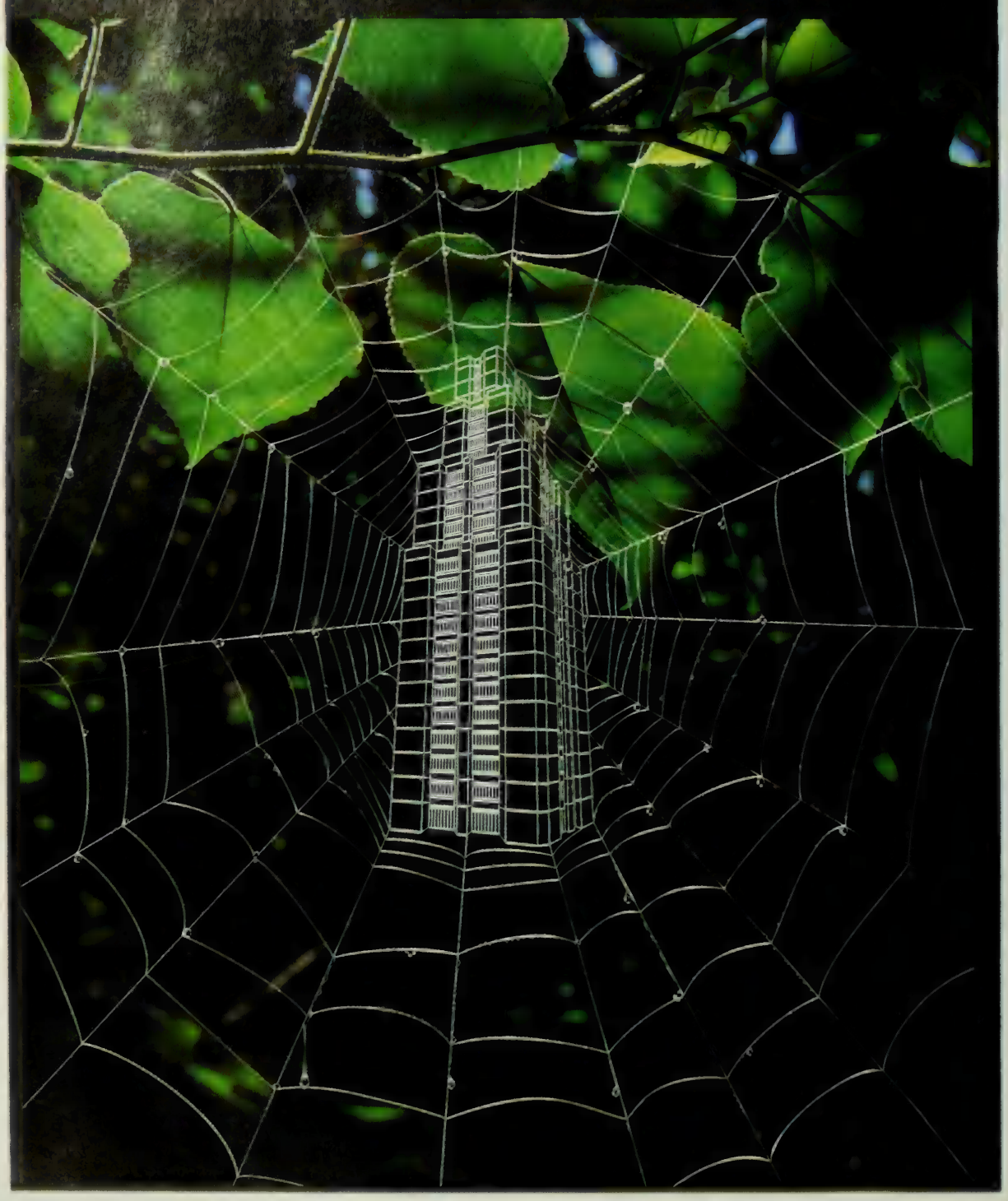
E-VALUE™

USE THE POWER OF THE E•VALUE CODE. Match our latest technology with our latest prices. Enter the E•VALUE code online or give it to your sales rep over the phone. www.dell.com/evalue

Dell recommends Windows 2000 Professional for business.

Call: M-F 7a-9p | Sat 10a-6p | Sun 12p-5p CT | Canada: 800-839-0148 | Mexico: 001-877-269-3379 | GSA Contract #GS-35F-4076D

Prices, specifications, and availability may change without notice. Taxes and shipping charges extra, and vary. Cannot be combined with other offers or discounts. U.S. only. [2]For a copy of our Guarantees or Limited Warranties, write Dell USA L.P., Attn: Warranties, One Dell Way, Round Rock, Texas 78682. [3]Service may be provided by third party. Technician will be dispatched, if necessary, following phone-based troubleshooting. Availability varies. [5]For hard drives, GB means 1 billion bytes; accessible capacity varies with operating environment. [11]Business leasing arranged by Dell Financial Services L.P., an independent entity, to qualified customers. Lease payments based on a 48-month FMV purchase option lease and do not include taxes, fees and shipping charges. Subject to credit approval and availability. Lease terms and pricing subject to change without notice. Dell, the DellHost.com logo, the Dell E Com logo, and stylized E logo, E-Value, DellHost, PowerEdge and PowerApp.web are trademarks of Dell Computer Corporation. Intel, the Intel Inside logo, and Pentium are registered trademarks and Intel SpeedStep, Pentium III Xeon, and Celeron are trademarks of Intel Corporation. MS, Microsoft, BackOffice, Windows NT, and Windows are registered trademarks of Microsoft Corporation. Trinitron is a registered trademark of Sony Corporation. ©2000 Dell Computer Corporation. All rights reserved.



AUTOCAD LT 2000i

SUDDENLY DESIGN IS A WHOLLY CONNECTED PROCESS.

Now it's easier than ever to get your entire design team wired and working together. AutoCAD LT 2000i combines 100% AutoCAD® 2000 & 2000i compatibility with Internet collaboration and professional 2D CAD features. It's the complete low cost productivity tool for connected environments.

autodesk

Order your free 30-day trial CD at www.autodesk.com/connected

Autodesk, the Autodesk logo, AutoCAD and AutoCAD LT are registered trademarks of Autodesk, Inc. in the United States and/or other countries.

Future-proof design for a new building type

HELLMUTH, OBATA + KASSABAUM PUTS AT&T AHEAD OF THE TECHNOLOGY JUGGERNAUT WITH A STATE-OF-THE-ART GLOBAL NETWORK OPERATIONS CENTER IN RURAL NEW JERSEY.

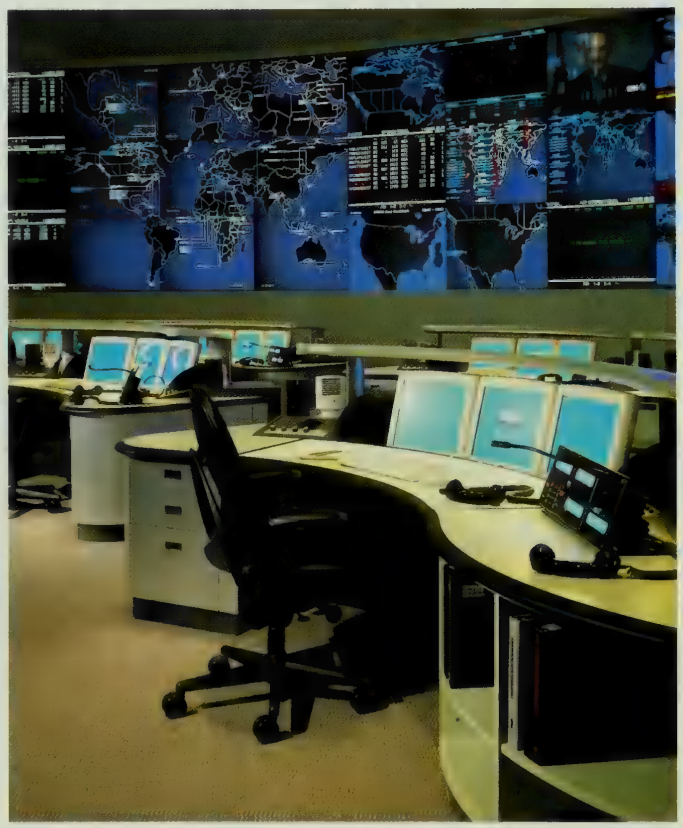
By Wendy Talarico

No one would suspect that AT&T's nerve center is the quietly elegant building gently burrowed into the hillside of the telecommunications giant's sprawling 200-acre campus in Bedminster, N.J., an hour from New York City. The state-of-the-art facility designed by the New York office of Hellmuth, Obata + Kassabaum (HOK) is the largest and most sophisticated command-and-control center in the world, according to AT&T.

The facility, which opened for business last December, 21 months after construction began, has two independent but intricately related functions. It serves as a marketing center where potential business and government clients are introduced to the company's vast telecommunications capabilities in a high-tech visitors' center. Tertiary spaces contain a briefing center and corporate offices, but the primary focal point is the Global Network Operations Center (GNOC). Operating 24 hours a day, every day, network managers direct all the traffic over AT&T's global network from this 70,000-square-foot command-and-control center, carved out in the core of the 200,000-square-foot facility.

The challenge for HOK was daunting because this emerging building type has few, if any, precedents. Besides designing for complex relationships among the specialized internal spaces and providing accessible storage for miles of fiber-optic and coaxial cable within several switching stations, audiovisual equipment, and workstations, HOK was responsible for making the facility "future-proof." Before completion, AT&T began offering ultra-high-speed bandwidth OC-192 services and has to be ready to offer OC-768 when it becomes available.

Rick Focke, HOK's lead designer on the project, acknowledges that "the technology drove the project." Because so much of the building is underground, this was largely an interiors project. HOK's interior group first established a footprint and then began to develop a hierarchy of spaces, based on the functional requirements.



HOK designed the consoles to function like automobiles. Each has its own HVAC system and audio system. The work-surface height is adjustable.

Under the direction of principal J. Steven Emspak, Shen Milsom & Wilke (SM&W) in New York provided the audiovisual, multimedia, acoustics, and telecommunications infrastructure for the building, which translates all the data to the GNOC's 42-foot-high panoramic wall of 180 projection screens. On peak days, the network handles more than 300 million voice calls and approximately 675 terabytes ("tera" equals trillion) of data for AT&T's 80 million customers. Real-time graphics, charts, and maps show spikes and dips in global network traffic. Some screens show the latest news and weather reports, because natural disasters and military conflicts influence network traffic. While computers handle the routing and rerouting during most of these fluctuations, it is up to the ever-present network managers to oversee and control network incidents.

Behind the high-tech glitz, computer rooms receive data via fiber-optic cables. "There are many computer platforms that we collect

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 244 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Describe how marketing and communications functions can work in the same structure.

2. Describe the futuristic technology used in the marketing center.

3. Explain the special requirements for the design of this facility.

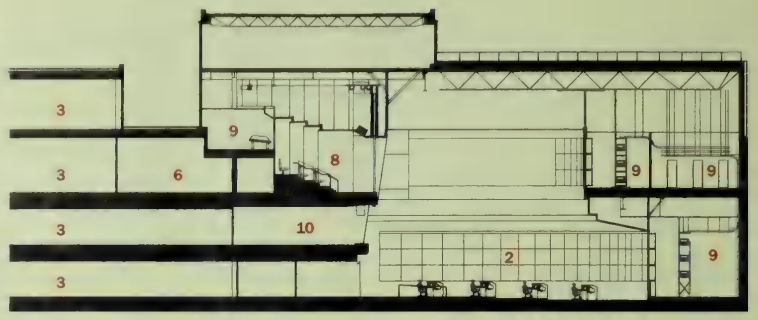
WWW *For this and more continuing education go to:* **www.architecturalrecord.com**



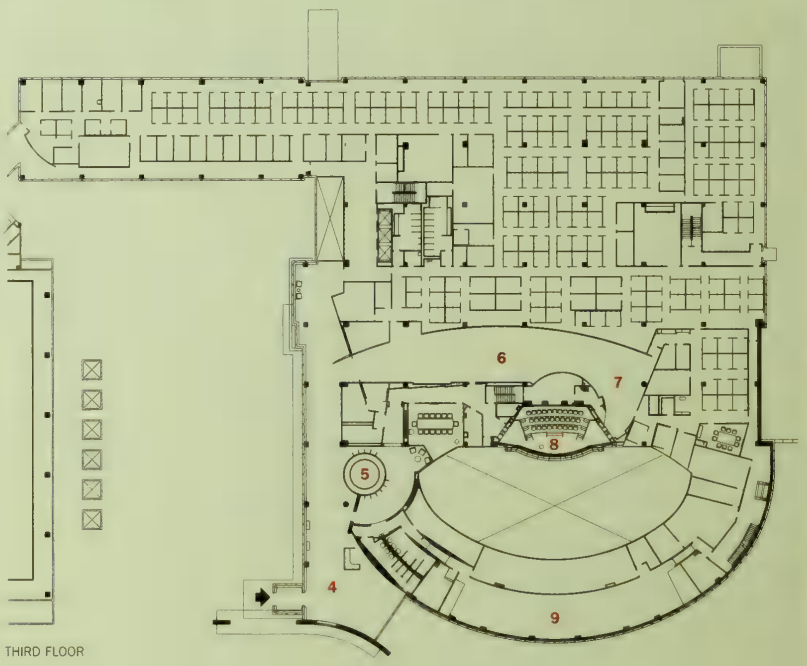
The new AT&T GNOC (above) is nestled quietly into a hillside on its 200-acre campus. Rear-screen projectors (below) feed real-time graphics and data onto a panorama of screens (opposite top), monitored by network managers. Visitors enjoy a high-tech, multimedia presentation in a theater and observation room (opposite bottom) three floors above the GNOC.

1. *GNOC reception*
2. *GNOC operations*
3. *Offices*
4. *Entrance lobby*
5. *Rotunda*
6. *Gallery*
7. *Internet cafe*
8. *Observation room and theater*
9. *AV/computer equipment*
10. *Situation room*

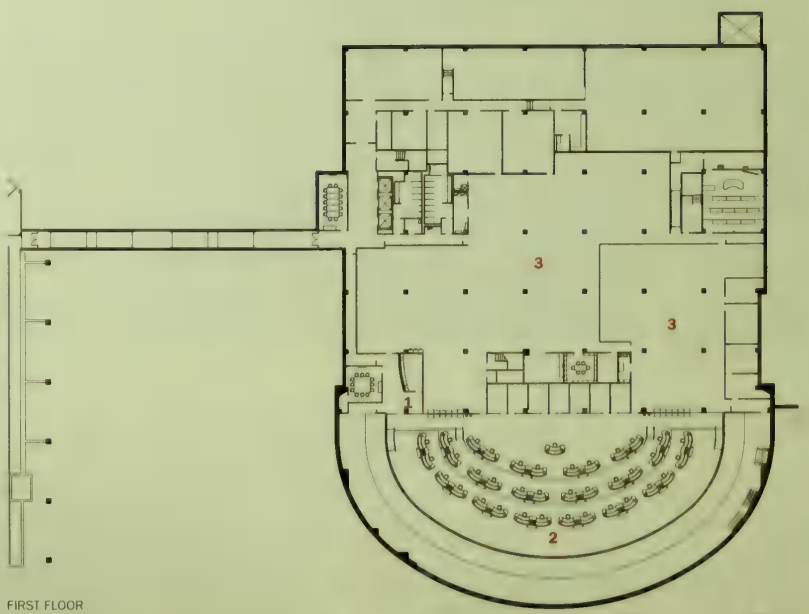




SECTION



THIRD FLOOR



FIRST FLOOR

0 60 FT.
18 M.





data from. Each of these must be interpreted by a computer with special software applications," explains Brian Boutilier, AIA, program manager for the facility. The data is sent from these computers to the matrix switch, which distributes video information to the screens on the GNOC floor and to other parts of the building. "The matrix switch, in essence, tells the video traffic where to be displayed," Boutilier adds.

Following the curve of the screen, 141 continuously running rear projectors sit on steel and plywood racks. "It's asking a lot of any type of audiovisual equipment to run 24 hours a day," says SM&W's senior associate Jon Burris. "The heat buildup is incredible, and lamp life is shortened." HOK designed easy access to the projectors, which require relamping two or three times a year.

WITH SO MUCH ELECTRONIC EQUIPMENT RUNNING AT FULL CAPACITY IN ONE SPACE, HEATING LOADS ARE TREMENDOUS.

Throughout the building, the power supply is primarily run beneath a typical steel raised floor. Cables pass through roomy ceiling trays, which allow for future expansion. With so much electronic equipment running at full capacity in one space, heating loads are tremendous. Having the GNOC underground mitigates some of the demand, but

New Millennium Mission Control Centers



Anyone who has ever followed a space flight knows that the Mission Control Center in Houston is the nucleus of the National Aeronautics and Space Administration (NASA). Built in 1963 and located in Building 30 at the Johnson Space Center, Mission Control was technologically sophisticated in its day. (A new Mission Control was built in 1996.) It would pale, however, next to the slick spaces that are today's mission controls, now known as network operations centers (NOCs). These are used to monitor much more than orbiting astronauts. And, thanks to the Internet and other technological advances, there are more of them than one would imagine.

Craig Park, a vice president with San Francisco–based Intellisys Group, a design/build firm that specializes in audio-visual, multimedia, and infrastructure systems, says he's seeing "a rapid rise in the Network Operations Centers (NOC) business." He estimates the number of of NOCs is growing by 100 percent per year and will continue for the next two or three years. Most of these are for Internet hosting and co-location facilities, such as Intel and Exodus.

But many companies that use NOCs are not so technology driven. This is not to say that the NOCs themselves are less complex. Intellisys, with Gideon Toal Architects of Fort Worth, Tex., created a NOC for Burlington Northern Santa Fe Railroad. The 20,000-square-foot facility has 75 consoles and includes a nine-screen NOC wall. There are six briefing rooms as well. All this is devoted to rail traffic; the screens display weather reports, train lineups, crew status, locomotive status, and shipping information.

Intellisys also designed and built the Boeing Rocketdyne NOC (shown here), also known as the Operations Support Center, in Canoga Park, Calif. The center is designed to monitor those space-shuttle and satellite launches that use the company's rocket engines. The facility includes six screens and four monitors that display real-time data and video images from launch locations. There are eight full-time operators on the floor. *W.T.*



The Interactive Gallery chronicles the history of networking, specifically the AT&T story.



Spark ideas with Viecon.com

Introducing Viecon.com by Bentley. The only project extranet that brings building professionals together. Giving them the ability to store, share and synchronize models, drawings, specs, photographs, animations, sound and more. Providing a catalyst for communication, collaboration and imagination. And hastening multi-tasking, productivity and profitability. So harness the power of Viecon and harness everyone's best thinking. All with the assurance of Bentley's commitment to superior technology. Viecon.com. Work together.

viecon.com
by Bentley

CIRCLE 53 ON INQUIRY CARD

© 2000 Bentley Systems, Incorporated. Bentley is a registered trademark and Viecon is a trademark of Bentley Systems, Incorporated or Bentley Software, Inc. BAA006950-1/0001 7/00





There are seven interactive displays in the gallery, as well as art-and-artifact islands illustrating the history of networking with vacuum tubes (above, foreground). Equipment displays are from various time periods, such as one from the 1950s (top, foreground), and a large-scale sculpture (top, rear left) made of submersible cable from 1915.

cooling still requires two 375-ton chillers. A third was installed for future use. Backup generators ensure a redundant fail-safe operation.

Ergonomic excellence

HOK designers worked closely with the AT&T engineers and managers to integrate the complex technology with the architecture and to identify crucial spatial adjacencies. Still, technology seemed to advance faster than the design and construction processes, and the architect had to be prepared for unexpected contingencies in this building type more than in most others.

With assistance from SM&W, Focke designed the managers' consoles, which spread across the floor of the GNOC. Originally, he designed them as conventional cabinets to house three large CRT (cathode-ray tube) monitors. However, state-of-the-art businesses such as AT&T are moving from these bulky CRT monitors to solid-state components made of chips and transistors. Solid-state devices function exclusively with internal electromagnetic signals, requiring no mechanical action. This advancement has allowed the development of flat-screen monitors, which take up considerably less space. Focke redesigned the consoles so that the monitors are freestanding on the horizontal surface of the console. Task lighting is contained in a self-supporting, extruded aluminum wing that spans 13 feet across the monitors.

"Every console functions like an automobile," explains Focke. "Each has its own HVAC unit, which is controlled by the individual network manager. Each has its own radio and speakers with local volume control." When a manager approaches a station, sensors pick up the presence and automatically turn on the computers.

STATE-OF-THE-ART BUSINESSES ARE MOVING FROM BULKY CRT MONITORS TO SOLID-STATE COMPONENTS.

Every effort was made to create an ergonomic work environment. The height of each console can be raised and lowered by an electric motor so that managers can stand to work if they want. The sum of these individual details achieves a surprisingly intimate work environment in an otherwise cavernous arena.

The narrative

There is an atypical architectural relationship between the sales-oriented narrative of the facility and the internal operations of the company. Visitors enter the building's reception area on grade, unaware that they are entering the building on the third floor. From there, they are led into a rotunda with a mosaic tile floor depicting the rivers of the world. Facts about AT&T line the walls in five languages, reinforcing the corporation's evolution from a telephone company to a global telecommunications networking giant. A high-tech gallery is the next stop. Here, visitors witness the history of telecommunications in interactive exhibits and "art-and-artifact islands" that include the phones used for the first transcontinental call and the first phone book.

A 30-seat theater with a panoramic screen, 30 feet long and 8 feet tall is the next destination. The purpose of this space is to impress potential clients with a multimedia presentation of the highest production values available. Here, HOK and SM&W pushed audiovisual technology past its existing limits. The long panoramic screen required three solid-state projectors, each streaming high-resolution digital images simultaneously. In order to achieve synchronization or what Emspak calls "edge-blend," SM&W turned to Silicon Graphics, Inc. (SGI), developer of desktop workstations, servers, and supercomputers, whose Onyx2

In Stock. Take Your Pick.

Call for Our Catalog at 1.800.944.2233

Why wait months for designer furniture? Now you can get modern designs like these smart stools from Design Within Reach in a matter of days.

Left: The Jorge Pensi Gimlet Swivel Stool, exclusively ours, in Grey or Terra Cotta and in 20", 26", 33" heights.



Center: The highly durable Indecasa TB Stool with seat in Black or Red polypropylene at 31" height.

Right: The Jim Stool with spun aluminum seat in either 24" or 30" heights. Call or check our web site for details and prices.

DESIGN WITHIN REACH

RA061100

www.dwr.com 1.800.944.2233

EXCLUSIVE PRODUCTS • MODERN DESIGN • IN STOCK AND READY TO SHIP

CIRCLE 54 ON INQUIRY CARD

incorporate supercomputing and visualization technologies to process 3-D graphics, imaging, and video data simultaneously in real time. With SGI's custom software, Caribiner, a Mexico-based multimedia-services provider created a seven-minute, totally synthetic presentation designed to excite the audience and build to an operatic finale, aided by a Dolby Digital Surround Sound system with 15 speaker cabinets and in-

NEW TECHNOLOGY-INFUSED FACILITIES NEED CAREFULLY PLANNED, EXPANDABLE INFRASTRUCTURES.

floor speakers, all of which is controlled by a custom-design graphical user interface (GUI) on a 20-inch touch panel.

Using theatrical rigging, HOK designed the panoramic screen to lift quickly and silently into the wall above as soon as the presentation ends, revealing, for the first time, the bustling GNOC three levels below. Meanwhile, the multimedia presentation continues on 39 rear-projection screens located above the GNOC's own 80-foot panoramic presentation of real-life operations. With this dramatic interface, HOK closed the gap between internal operations and external marketing strategies.

Client, architect, and consultants agree that the project is successful because the systems, content, and physical space were developed as a single vision and realized as one unit. Unlike building types of the past, new technology-infused facilities require carefully planned, expandable infrastructures. It's no longer enough to pack the shell and be done. Architects now design for change, because nothing can impede the migration of technology. ■



An ancient map of the world rendered in mosaic tiles decorates the rotunda.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "Future-Proof Design for a New Building Type" using the learning objectives provided.
- Complete the questions below, then check your answers [page 244].
- Fill out and submit the AIA/CES education reporting form [page 244] or file the form on ARCHITECTURAL RECORD's Web site at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

1. How are the two functions of the AT&T facility incorporated?

2. How was the global network operations center made ready for future technology?

3. How is the marketing center using technology to impress potential clients?

4. What was the driving force behind the design of this facility?

5. What special problems did this new facility present for the design program?



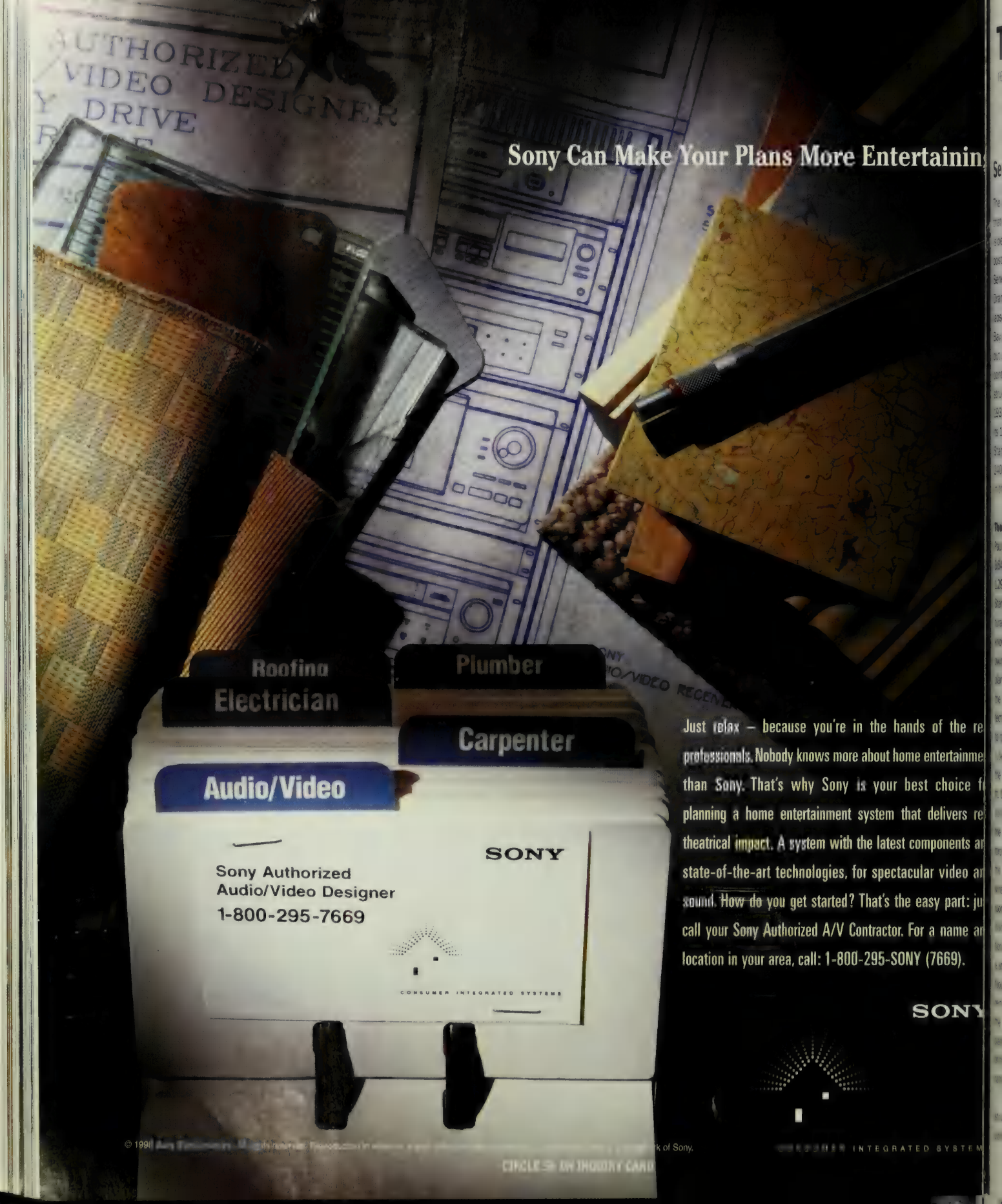
SLEEK LINES SUBTLE CURVES AND GRACEFUL NEO CLASSIC ARCHES

MAKE SURE THEY BUILD IT THE WAY YOU DESIGNED IT.

buzzsaw.com™
an Autodesk® venture

Set up a personalized project site on Buzzsaw.com's secure servers and get your whole team working together in a matter of minutes. Register the members you want with the permission level you choose, and use your central workspace to track decisions and changes throughout the project lifespan. From design collaboration, to bidding and buying, to construction management, it's all in a day's work at Buzzsaw.com.

CIRCLE 55 ON INQUIRY CARD


Sony Can Make Your Plans More Entertainin
Roofing
Electrician
Plumber
Carpenter
Audio/Video
SONY
Sony Authorized
Audio/Video Designer
1-800-295-7669
CONSUMER INTEGRATED SYSTEMS
Just relax – because you're in the hands of the re
professionals. Nobody knows more about home entertainme
than Sony. That's why Sony is your best choice f
planning a home entertainment system that delivers re
theatrical impact. A system with the latest components ar
state-of-the-art technologies, for spectacular video ar
sound. How do you get started? That's the easy part: ju
call your Sony Authorized A/V Contractor. For a name ar
location in your area, call: 1-800-295-SONY (7669).
SONY
INTEGRATED SYSTEM
CIRCLE ON INQUIRY CARD

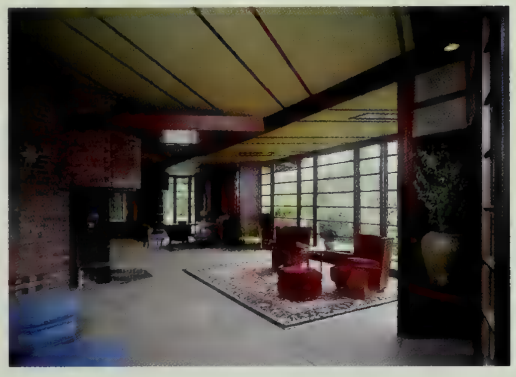
Tech Briefs

California firms find an innovative way to repair a Usonian House ▪ Materials research and development promise an earthquake-resistant future

Seismic upgrade for Frank Lloyd Wright's 1937 Hanna House at Stanford University

The 1989 Loma Prieta earthquake that hit the San Francisco Bay Area is perhaps best remembered for postponing the start of the World Series between the two local teams. Dramatic damage, such as the collapse of a portion of roadway on the Bay Bridge, was quickly repaired, but painstaking seismic retrofitting continues, especially on historic structures. Frank Lloyd Wright's 1937 Hanna House including its 1950 workshop addition at Stanford University was one of 240 university buildings damaged in the earthquake.





Massive unreinforced chimneys, long window walls, and an open plan (above and left) made the repair and seismic upgrade of the Hanna House difficult.

The Wright way to build

Paul and Jean Hanna donated their 3,640-square-foot house and 1,298-square-foot workshop to Stanford in 1975 for use as a cultural and educational center. Also known as the Honeycomb House owing to Wright's use of a hexagonal planning and construction module, the Hanna House has several architectural distinctions that contributed to its vulnerability in the 7.1 magnitude earthquake; these increased the complexity of the seismic retrofit. Called chimneys by Wright, and considered the heart and hearth of the house, three essentially unreinforced brick walls rising well above the rooflines enclosed flues, electric wires, and HVAC ducts; provided room divisions; and carried roof loads. The varying-height roof sections span long distances. The site is steeply sloped with cut-and-fill topography held in place by poorly reinforced retaining walls. By 1989 the unconsolidated fill had compacted and settled so that sections of the slab were spanning over, rather than resting on, the ground.

Typical of Wright's Usonian construction, the walls are very thin, constructed with one-by-eight-inch studs placed parallel to the finish surface 26 inches on center. Two-inch horizontal battens are screwed into the interior and exterior side of the studs on 13-inch vertical centers. The surface is then finished with 11-inch boards notched into the battens and the vertical supports or, for the vast window walls, filled in with glass panels. Solid walls are limited to segments of the north and west walls, some interior separations, and at most corners. Wright compensated for the thin-wall construction by creating complete or nearly complete hexagonal units to act as columns in supporting concentrated roof loads. These hexagonal units also served as functional architectural elements such as closets.

The domino effect

Weak connections between all of these architectural units compounded the building's inability to provide the lateral resistance necessary to withstand the horizontal forces created by an earthquake along a slip-strike fault, such as the San Andreas. During the earthquake, the retaining walls displaced, allowing further instability in the fill and slab. Made of an inherently brittle material and carrying massive weight, the brick chimney walls simply crushed at the base. The roof rafters, only resting in pockets in the masonry, pulled away. The open plan, the limited area of solid walls, and the virtual lack of a wall cavity left few places to add strengthening and stiffening to the structure without altering Wright's original design.

"Because the finish and the structure are the same everywhere, with dimensionally sensitive joints, there was almost nowhere to hide the strengthening," said Stephen Farneth, project principal at Architectural Resources Group (ARG) of San Francisco, the lead firm in an effort that included structural and geotechnical engineers, Rutherford and Chekene, also of San Francisco, and associated architect Martin Eli Weil of Los Angeles.

An invisible remedy

The solution was driven by the soil condition, which had been the root cause of the failures, and the intention to make all interventions reversible, in keeping with current historic-preservation philosophy. "We didn't want anyone to k we had been there when we were done," said Bret Lizundia, the structural engineer.

Cores were drilled into the chimneys using a dry-core drilling technology that prevents potential discoloration or damage from water. Rebar was inserted and anchored to the existing foundation, and the core filled with grout. To provide overturning resistance in the vertical masonry elements, the slab was removed and grade beams were anchored to the top of the retaining walls and the base of the chimneys. This also eliminated the need for the unconsolidated fill to support the new floor slab. Several of the solid walls were converted into shear walls by the insertion of plywood

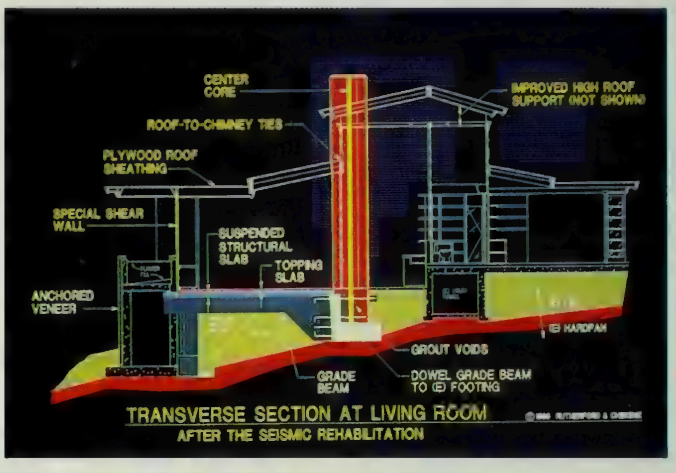
panels into the one-inch cavity between the interior and exterior board and batten finishes. The roofs were stiffened with plywood, and the rafters were reattached to the chimneys with mechanical connections. To provide additional strength and stability, the team upgraded strategically located hexagonal closets by adding structural tubes with new footings, plywood sheathed interiors, steel corner angles, and a rigid ceiling plate.

To stiffen the roof, the design called for the plywood to be cut into parallelograms to follow the joist lines, a considerably more difficult task than filling the left over spaces.

Wright had no idea the challenge his thin-wall construction would pose to the design team charged with protecting and preserving his work. The carefully crafted joints, board and batten finish and structure attached only with wood screws were intended to permit disassembly and reconfiguration. In order to stiffen the walls, the plywood was inserted in 16-inch wide strips between the studs and screwed from the inside into the redwood boards. Because every aspect of the wall-stiffening solution was unique, a full scale mock-up was tested for earthquake performance and performance of the plywood to redwood connections.

The cost of the nine-month seismic retrofit was about $1.2 million. The insertion of contemporary life-safety requirements and technology needs into historic structures will continue to require sensitive and detailed solutions, but the Hanna House seismic retrofit demonstrates that it is possible, even under such demanding conditions.

Barbara Knecht



Section showing the key elements of the seismic retrofit

A Xerox scientist finds a way to make building materials more organic

Imagine a building that can sense when an earthquake strikes and can instantly transform itself into a flexible, treelike structure capable of dissipating the seismic shock. Or imagine a bridge that can sense when it's about to be ripped apart by hurricane-force winds and can instantly stiffen its support system to withstand the assault. Or imagine a car that can detect when its engine has developed a potentially fatal flaw and can reflexively adjust its operations to mitigate the danger. Feng Zhao, a computer scientist at Xerox's Palo Alto Research Center (PARC), has been imaging such "smart structures" for a long time, and he says the day may not be far off when they are part of our everyday lives.

Zhao and his colleagues in the Collaborative Sensing Project at Xerox PARC are developing a system composed of tiny, inexpensive sensors that can capture information about their immediate environment—such as heat, light, and motion—and share that data with thousands, or even millions, of identical sensors scattered nearby. That network of "massively distributed sensors" can analyze the resulting mountain of information in real time and initiate an appropriate response almost instantaneously. In the case of an earthquake-resistant building, that response could take the form of sending electrical signals to a smart material called a "shape-memory alloy" embedded throughout in the building's structural frame. That material, in turn, would respond to the signals by expanding, thus providing controlled flexibility to the structure and enabling it literally to wiggle through a seismic event. Conversely, "collaborating sensors" in a wind-resistant bridge or building could send electrical signals to a smart material in the span's support structure, prompting the material to contract, thereby stiffening the bridge's resistance to wind.

"Think of these sensors as intermediaries between the physical world— the world of buildings and bridges—and the human world, the world of knowledge and ideas," Zhao says. "In one direction, they can take information from the physical world and turn it into something that humans (or computers) can look at and make sense of. In the other direction, they can infer human needs by capturing contextual information about people's preferences, and tell the physical world how to respond."

What distinguishes collaborating sensors from their dumber cousins—such as thermostats or barometers—is that they contain sophisticated software that enables them to organize and share information in an almost organic way. "They're like the neurons in our brain," Zhao says. "They respond adaptively to the environment. There is no central database. Each node [sensor] has a little bit of memory. Groups of nodes can form supernodes that have more knowledge about the environment." And, like the human brain, the sensors are very good at filtering out unimportant information. "Most of the time they're in sleep mode. They only wake up when something significant happens," he adds.

Collaborative sensing is already being used in a limited way in some everyday devices. Xerox printers, for example, contain sensors that can detect tiny deviations in the movement of paper through the machine and can automatically make adjustments to avoid jams. But Zhao says the sensors will have to get a lot smaller, smarter, and cheaper before they can be deployed on a massive scale in construction and other commercial applications.

The Xerox team has developed fingertip-sized sensors that could be mass-produced at a cost of about $5 or $10 each. Within five to 10 years, the company expects to shrink the sensors to the size of peppercorns or smaller while, at the same time, dramatically increasing their capacity to process the blizzard of raw data generated by a massively distributed network (a mountain of miscellany, Zhao says, that will make the amount of information available on the Internet seem small in comparison). But it may take another 10 years beyond that before the cost of the sensors will be low enough—pennies apiece—to make economic sense for builders. At that point, Zhao says, collaborating sensors will be not much different from bulk-building materials such as nails and bolts: They could be embedded in steel beams and other structural elements or stirred into paint or asphalt, and sprayed onto walls or roads. ***Peter Kupfer***



AECdirect links your worksite with the Internet, empowering you to spend more time designing and building. Match specification information from MASTERSPEC® to corresponding product data on Architects' First Source and Sweet's, a service only available on AECdirect. Grow your business with valuable development tools from leading sources, access the only Web source for AIA contract documents, and continue your professional development with online AEC seminars.

AECdirect

Designed to Build Results.

Get the job done faster, make your clients happier, earn profits more quickly, and make your life easier at AECdirect. With a simple mouse click, you can leverage technology to your advantage.

IBM an e-business solution

AECDirect is an IBM e-Business. The IBM logo, e-business logo and e-business Mark are trademarks of IBM Corporation in the U.S. and other countries. For IBM Mark meaning and disclaimers, visit www.ibm.com/e-business/casestudies.

CIRCLE 57 ON INQUIRY CARD

ounding Partners: AIA BENTLEY CMDGROUP iPIX The McGraw-Hill Companies Hanley-Wood, LLC

Put some virtuosity back into your designs.

Give your architectural designs the visual impact they need with ArchiCAD.



Virtual building modeled and rendered in ArchiCAD by Mr. Peter Bach and Mr. Peter Hadadi.

It's a paintbrush on a blank canvas. A sharp chisel ready to cut stone. It's ArchiCAD software. The ultimate architect's tool. ArchiCAD's easy-to-use interface allows architects and designers to create, rather than draw, to build rather than draft. It offers cutting edge presentation features, automatic documentation, intelligent objects, and is fully compatible with AutoCAD. Graphisoft has been developing design solutions around the building simulation philosophy for 18 years.

We invite you to look at the standard in automated building simulation and documentation. It comes with a 30-day guarantee, and getting our CAD productivity kit on how to move from any software to ArchiCAD is as easy as calling **888.314.5042**. Or visit our website at **www.worksthewayyoudo.com**.

Here's what architects had to say about our software:

"Traditionally, you don't know if a project is a success until you walk in the building after the painters have left. ArchiCAD allows the client to look behind the curtain; they don't have to read the architect's mind."

MICHAEL HRICAK, AIA, PARTNER,
ROCKEFELLER/HRICAK ARCHITECTS

"My customers have become accustomed to asking 'Can I see what this would look like?' They know I can make the change and show them the results right then, or e-mail it to them later."

MIKE OSTERMANN, OWNER,
OSTERMANN HOME DESIGN AND MILESTONE STUDIO

"ArchiCAD has given us a tremendous amount of power, and it has a short learning curve."

MALCOLM DEIGHTON, CO-OWNER,
DEIGHTON GIBBS ARCHITECTS



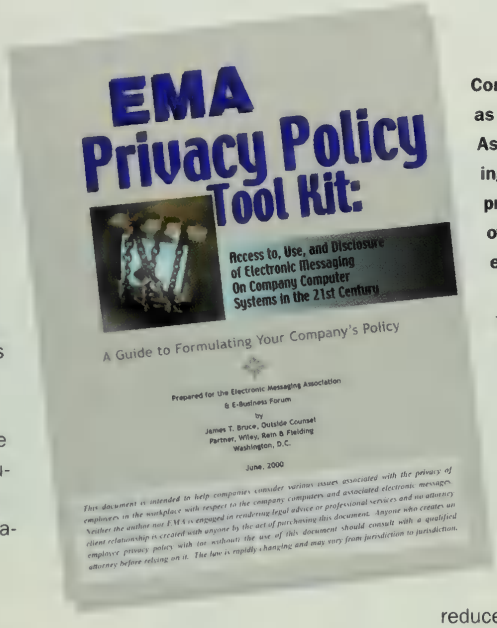
It leaps over the competition.

CIRCLE 58 ON INQUIRY

GRAPHISOFT® ArchiCAD®

Netiquette for the architect

By Jerry Laiserin, FAIA



Computer industry groups, such as the Electronic Messaging Association, recommend balancing rights of employers to protect themselves from misuse of E-mail versus employees' expectations of privacy.

The first E-mail message was created in 1971 when engineer Raymond Tomlinson at BBN was refining a software program to transfer file information between users over ARPAnet, the Pentagon-funded precursor of the Internet. Tomlinson realized that receivers and recipients of messages on a multicomputer network needed unique identifying addresses that were computer-readable and that included both the person's computer-user name and the name of the computer being used. This boiled down, in essence, to "somebody someplace."

Looking over the standard Teletype keyboard of the time, Tomlinson sought a character to separate the "somebody" from the "someplace." It could not be a character that was used in any programming command, nor in any human or computer name, which left few choices, among them the "@" sign. Thus, the now ubiquitous yourname@companycomputer.com.

In the three decades since Tomlinson's first message, E-mail use has grown exponentially, with current volume exceeding that of postal mail (which E-mail users deride as "snail mail"). Yet beyond the mandatory "@" sign and some behind-the-scenes technical standards, E-mail remains an unruly, undisciplined, and occasionally dangerous medium of communication.

E-mail combines the casual spontaneity of a phone conversation with the permanence of a written letter and the ability to propagate and spread like kudzu. As E-mail becomes integrated into the business procedures and project-delivery methods of design firms and their clients, as well as consultants and contractors, it is imperative that architects understand how to make effective and appropriate use of E-mail and related communications media, such as the Internet and project-collaboration networks.

Contributing editor Jerry Laiserin, FAIA, provides strategic consulting services to architects and their technology providers.

Playing by the rules

"E-mail and Internet use have to be considered in the context of an overall office communications policy," according to Cherry Melillo, Hon. AIA, associate and office administrator at Butler Rogers Baskett Architects (BRB) in New York. Having surveyed such policies for the Society of Design Administration (SDA), to which she belongs, Melillo emphasizes that project staff must treat all design office communications as part of the project record. As such, these messages reflect on the firm's image, performance, and legal standing. "E-mail may feel conversational, but it is emotionally tone-deaf," she observes, "so it is critical to reread as if you were the recipient and rewrite if necessary." Melillo adds, "Sometimes you just have to pick up the phone," especially when transmitting bad news.

E-mail should be archived with other project records and subjected to records retention and disposal policies that account for issues such as the applicable statute of limitations on claims arising from the project, as well as the fact that electronic records are "discoverable," or subject to examination in legal proceedings.

For example, E-mail messages shouldn't be erased if a claim is already in the works. Even when it is okay to delete old messages, everyone in the firm must be made aware that copies of E-mails typically are saved on the firm's servers and backup media, as well as on the sender's or recipient's computer.

On the receiving end of E-mail, users should be trained not to open unexpected file attachments, even if they appear to have been sent by someone known to the user. Most computer viruses are transmitted when a user opens an "infected" file attachment. Microsoft Word files are the most popular "carriers" used by virus writers, but AutoCAD files are capable of being infected as well. Even with network-level antivirus scanning software, new viruses will get through to the users' desktop computer.

Files downloaded from the Internet are also a source of viruses and other "malicious code." To reduce the risk of infection, firms should install network-level "firewall" programs and encourage users to limit their Web surfing to sites with a known business purpose relevant to the practice or project.

Inside job

Communication problems don't come exclusively from external sources. Any firm can incur liability for having employee-generated E-mail or Internet content on the office computers that may be offensive or libelous, that may infringe a copyright, or that may otherwise run afoul of the law.

Melillo stresses that even though most firms permit personal E-mails as well as personal phone calls, all employees must understand that desktop and portable computers, wired and wireless phones, fax machines, and so on are all included in the "office communication system provided by the firm for business purposes, on

which employees have no expectation of privacy."

For example, BRB provides every employee a written policy statement that outlines the firm's expectations regarding appropriate use of E-mail systems and Internet access and puts employees on notice that their usage is subject to monitoring. Drafted jointly by administrative and information-technology staff, this policy statement is intended not so much to deter frivolous activity as to protect the firm from legal exposure. Implementing such a policy does not imply that BRB has or had a problem, merely that the firm is being prudent.

"Most architects are too busy making architecture to make trouble," says Melillo, but what an individual may perceive as "private" on his or her "personal" computer in the office may contribute, for example, to a "hostile work environment" or other form of harassment.

BRB is hardly alone. According to the Electronic Messaging Association (EMA), an organization based in Alexandria, Va., that represents E-mail system vendors and E-mail user companies nationwide, the majority of larger American businesses already have such policies in place.

Lisa Pratt, EMA's vice-chair, notes that having a written policy is an important first step in setting a proper balance between a company's need to protect itself and the fair treatment of employees. Even though most state and federal laws permit monitoring of all employee Web surfing and E-mail (even "personal" E-mail) without notice, EMA advises that it can make good business sense to notify employees about just how much or how little privacy they can expect in the workplace context. EMA publishes a "Privacy Policy Tool Kit" to help firms tailor a policy that suits the nature of the business and the firm's "corporate culture."

Some firms may choose a hard-line policy of examining all messages and Web requests with "zero tolerance" for transgressions, relying on readily available and easily affordable software tools such as SurfControl and LittleBrother to track Web access or monitor every keystroke. Others may shy away from what New York State Attorney General Eliot Spitzer has characterized as the "Big Browser" approach and opt instead for a policy of prior notification with inspection only for suspected problems.

Keeping up with the times

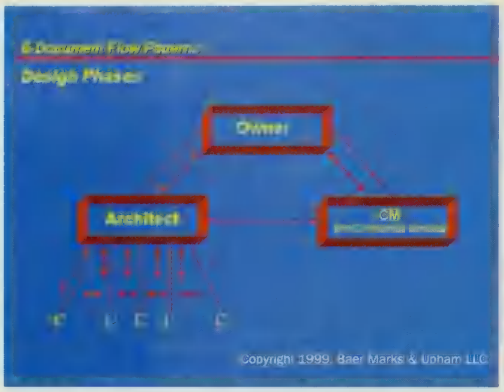
These complexities of E-mail and Internet policy pose further dilemmas for the lawyers who advise architects on practice and project-delivery issues. "Technology today, and specifically construction-industry technology, is changing faster than the applicable law," according to Mary Jane Augustine, an attorney with the construction industry practice group Baer Marks & Upham in New York. Augustine explains that because it takes time for statutes and case law to catch up to the changes, lawyers must often "rely on analogy to existing law, which may not provide the measure of guidance" lawyers and their architect clients would like.

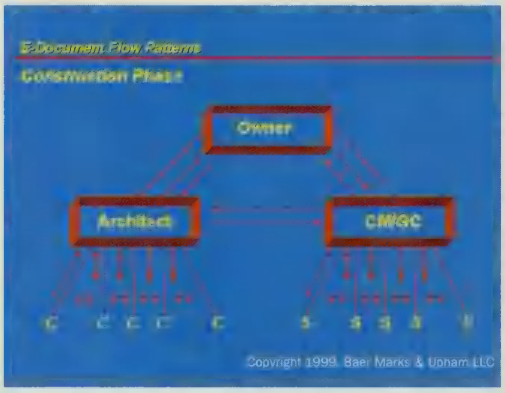
In the here and now, Augustine advises establishment of project-specific E-mail addresses for the receipt of incoming correspondence and design documents; she also recommends maintaining file copies of outgoing correspondence and documents. "Architects should designate authorized personnel to send and receive documents on each project," says Augustine. Consultants and contractors should be informed as to who in the architect's office is authorized to handle such communications so that they can be sure they are receiving the appropriate versions of a document from the architect and sending their work to the responsible person. One of the big issues of proof in construction claims is the question of who had notice—of a problem, of a particular document, of a delay—and when that notice was received. According to Augustine, this may not be an issue in the future, when all project documentation will be available on project Web sites for all interested parties to see at the same time. If no party has the benefit of information that is unavailable to other parties, none can claim lack of notice as a defense, leading to a big change in the way claims are developed.

For regular E-mail, Augustine advises incorporating into the owner-architect and architect-consultant agreements language that spells out procedures for transmission of design documents, including such things as confidentiality, ownership of design documents, the right to rely on the electronic versions of documents, and coordination of documents and review of submittals.

If project documents and communications are to be shared on a collaborative Web site, especially if the Web-based collaboration extends into the construction administration phase, Augustine recommends that all the users enter into an operating agreement for the Web site, covering additional issues such as maintaining a professionally reasonable time for reviewing items posted on the Web site and assigning responsibility for continuity of project information in the event of a Web crash or other failure of the collaboration service.

As with other aspects of digital technology that impinge on the traditional procedures and methods of design practice, the problems posed by E-mail, the Internet, and project-specific communications will keep architects, office administrators, and their legal advisers busy for some time to come. ■



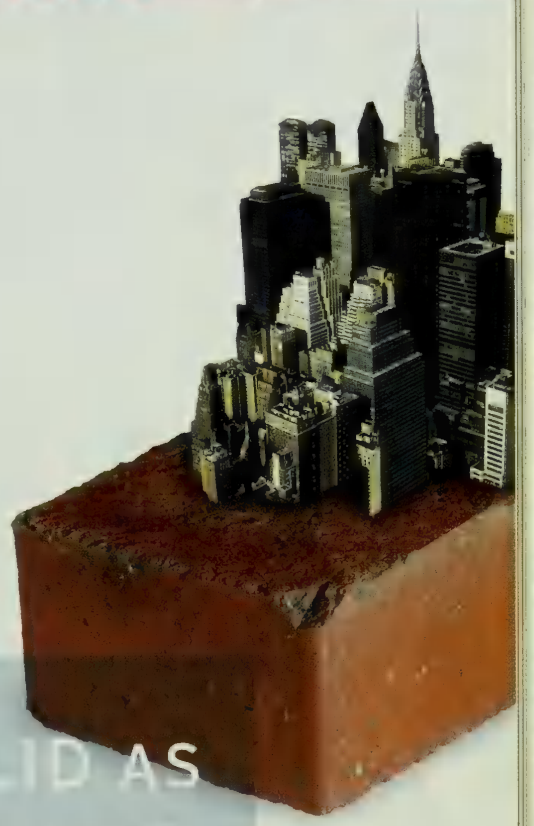


Electronic document flows increase in volume and shift among project participants as projects advance from design to construction phases. Lawyers recommend adapting E-mail policies to the needs of project-specific communications. In the chart, "c" refers to consultants, "s" to subcontractors.

E-MAIL REMAINS AN UNRULY AND UNDISCIPLINED FORM OF COMMUNICATION.

WWW *For a list of vendors involved in Internet protocol, go to* ***Digital Architect*** *at* ***www.architecturalrecord.com***

STRENGTH.



SOLID AS
A BRIC.

BECAUSE YOU CAN'T BUILD ON VAPORWARE.

Bricsnet is the developer of sophisticated, affordable software solutions you can use right now to manage all aspects of the building process. We have support centers around the world, multi-language software applications, and over 14,000 users representing some of biggest names in the building industry. What's Bricsnet? It's something you can build on. Today.

bricsnet
Build on it

Copyright © 2000 BRICSNET. All rights reserved. Bricsnet , the Bricsnet logo, and Build on it, are trademarks of Bricsnet N.V.

CIRCLE 59 ON INQUIRY CARD



HUNTER DOUGLAS PRESENTS

designing with DAYLIGHT

HunterDouglas
WINDOW FASHIONS

INCORPORATING THE SUN'S RAYS into architectural interiors can be energy efficient and aesthetically pleasing, but controlling the quality of light is crucial to preserving materials and preventing reflection and glare.

Bringing the sun's rays inside is one of the oldest and most reliable means of lighting architecture. From the backlit stained glass windows of European cathedrals built in the Middle Ages to the subtle illumination diffused by the canvas ceiling of Frank Lloyd Wright's studio at Taliesin West, daylighting has played a lead role in enhancing the interiors of remarkable spaces. Abundant sunlight, of course, is often considered a premium feature of houses sought by prospective homeowners, while daylighting is equally prized in workplaces from factories to office towers. Though the advent of inexpensive electricity and varied electric light sources has led some architects to turn away from daylighting as a resource, recent advances in microelectronics, high-performance glazing, and fabrics are spurring new explorations of harnessing sunlight as a design strategy.

But, unless properly controlled, daylight can create as many problems as benefits within interior spaces. For example, in today's personal-computer-driven world, windows or skylights can cause direct and reflected glare on computer screens. Light coming through unprotected windows, which may be supplemented by electric lamps, can damage artwork, furniture, and everyday objects in the home or office. Uncontrolled daylight that is used as a light source may not provide the optimum visual conditions for perceiving spaces and the objects within them. Armed with an increasingly sophisticated awareness of the nature of light, clients are calling upon architects to consider the effects—both beneficial and harmful—of daylight.

Architect Richard Meier, the keynote speaker at the day-long seminar "Designing with Light," sponsored by Hunter Douglas at the American Craft Museum last June, delineated his use of daylight in the design of recent projects, including the Getty Center in Los Angeles. "Always in our work, there is a concern for the variety of ways in which light comes through in a variety of ways," he said. "Each situation is different; it's dependent on the location, site, locale, climate, and the nature of the architectural program—what it is and what it can be. The effect of lighting predominates our thinking about the form and use of spaces."

At the Getty Center, Meier's mandate was to design the museum's top-floor painting galleries so that visitors could look up and see the sky through glass ceilings. Because conservators were concerned with allowing in so much daylight, Meier's solution was the use of automatic louvers above the glass that move throughout the day deflecting the sun's direct rays.

"We devised a louver system which is above the skylights, so that in the morning it is turned on one direction and keeps direct light from coming in," Meier says. "And in the afternoon, it flips and is in the other direction, and therefore you can always be in the gallery space and look up and see the sky, but direct light never comes into the top-lit gallery spaces. As you go through all of the painting galleries throughout the day, you can always see paintings in natural light. Artificial light is never needed, and that's unusual in most museums today."

AIA/ARCHITECTURAL RECORD Continuing Education

Use the learning objectives below to focus your study as you read **designing with DAYLIGHT**. **To earn one AIA/CES Learning Unit including one hour of health safety welfare credit,** answer the questions on page 186 and follow the reporting instructions on page 244. Or use the Continuing Education self-report form on *Record's* Web site—www.architecturalrecord.com.

LEARNING OBJECTIVES:

- Compare the color of daylight to the colors of electric light.
- Describe the effects of ultraviolet light.
- Explain different light control methods.
- Describe how diffusion layers eliminate shadows.

Outside light also comes into the Getty Center lobbies and light wells separated from light-sensitive displays. To develop the system, the design team built scale models of the skylights and louvers at an increasingly larger sizes until they were large enough to wheel outside and sit within. Inside the units they could measure the amount of light coming in and observe its quality.

Similar in spirit to Skylight Louvers that enhance a museum environment, a more widespread application to control daylight in homes, offices, and many other building types is the use of blinds and shutters at the window. The production technology behind today's window coverings offers many viable Daylight-Control Solutions, which take into careful consideration the nature of light itself.

THE LANGUAGE OF LIGHT: DEFINING BASIC TERMS

Deciding to harness daylight for an architectural project requires a good understanding of the nature of light itself. Daylight is often thought of as being white, but it is actually a balanced blend of different wavelengths of electromagnetic radiation. A segment of this electromagnetic radiation in the form of visible waves, is reflected by objects in the visible environment, stimulating the optic nerves and interpreted by the brain as light. The intensity of this energy is interpreted as brightness and the length of the combined wavelengths that are reflected by an object as its color. Sunlight is composed of all colors of the spectrum: red, orange, yellow, green, blue, and violet.

Electric light is also electromagnetic radiation, but is created by passing an electrical current through a filament in a light bulb or by electrically charging a gas or phosphor coating inside a tube. But different light sources, such as daylight, incandescent or fluorescent, produce the colors of the spectrum in different proportions. An incandescent lamp and natural daylight are both full-spectrum sources with a full range of wavelengths. A big difference between the two, however, is that daylight has a lot of blue in proportion to red, while an incandescent source has very little blue in proportion to red. That is why an incandescent source appears yellower and daylight has a bluish appearance. The higher proportion of incandescent light is not noticeable when a fixture is turned on at night, but if a lamp is turned on in a room where there is daylight, the contrast between the two sources is readily apparent.

COLOR TEMPERATURE

The color of light is referred to as color temperature. Measured in degrees of Kelvin (K), a light source's color temperature is a shorthand way of referring to how warm or cool the light is, or what the ratio of red to blue is. Radiation from the sun is loaded with blue, while incandescent light has a yellow cast. The color temperature of daylight ranges between 5,000 and 10,000 degrees K, while the color temperature of light coming from a tungsten filament measures about 2,700 degrees K.

COLOR RENDERING

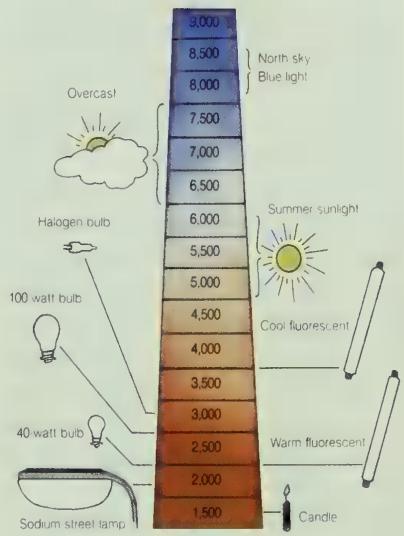
Color rendition is sometimes used as a synonym for color temperature, but the terms mean different things. Color temperature describes our perception of light emitted from a source, while color rendition refers to our perception of the way in which light affects an object which it illuminates. Color rendering index (CRI) assigns a value to an electric light source, which compares how well that source renders color as compared to sunlight. The CRI of a tungsten halogen lamp is about 82, while the CRI of daylight is 100.

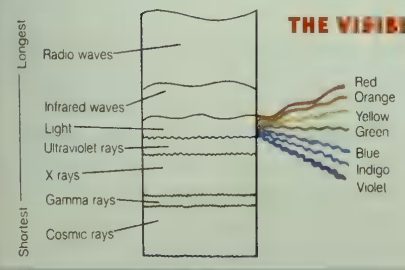
REFLECTANCE, CONTRAST, AND TRANSMITTANCE

When light strikes any opaque surface, some of it is reflected. The brightness of light hitting a surface is measured in footcandles. One footcandle represents the illumination falling on a surface 1 foot square from a standard candle located 1 foot away. So if 100 footcandles of light strike a wall and 30 footcandles are reflected by the wall, the wall's finish has a reflectance of 30 percent. Contrast is measured by dividing the lowest light level in a space by the highest level. Some light is also absorbed when it travels through transparent or semitransparent medium. If 100 footcandles hit a semitransparent surface, and 90 footcandles emerge from it, the material said to have a 90 percent transmittance.

Visible light is only a small segment of the eletromagnetic spectrum. Light sources also emit considerable infrared energy (heat) and many also give off ultraviolet (UV) radiation. At the short-wavelength end of its spectrum and hues where ultraviolet radiation occurs, light is particularly active, quickly fading colors and breaking down materials such as fabrics, paper, leather, and wood. UV is even used to kill germs in hospitals. All daylight contains a large UV component. Longer wavelengths are less destructive, but still very active. All visible light, including that from electric sources, can destroy materials. Because of its lesser intensity and spectral distribution, damage from electric light is much less destructive than daylight, but can be destructive none the less.

COLOR TEMPERATURE





THE VISIBLE SPECTRUM

THE ELECTRICAL SPECTRUM

LIGHT IS ONLY A SMALL PORTION OF THE ELECTROMAGNETIC SPECTRUM. ALL LIGHT SOURCES EMIT CONSIDERABLE INFRARED ENERGY (HEAT), AND MANY ALSO GIVE OFF ULTRAVIOLET (UV) RELATION.

MARTHA WASHINGTON'S SHOES

Illustrating how uncontrolled daylight can damage materials, conservator Steven Weintraub of Art Preservation Services cites the case of Martha Washington's shoes. A bright pink pair of the First Lady's footwear was acquired by the Museum of the City of New York in 1951. The shoes were placed on permanent diplay in a location bathed in strong daylight. After a decade, they were bleached to a ghostly cream color and the fabric was decaying.

Of course, it is not psychologically desirable or even practical to block light out of spaces simply to preserve the objects housed within them. A connection to the outdoors is recognized as crucial to our sense of well being, and can play an important role in generating emotional and physical responses. For example, hospital studies have shown that patients can recover faster in rooms enveloped in warm colors and the right amount and tone of light. The juxtaposition of environments lit with daylight can also affect perception. A dark hallway between two rooms awash in sunlight can be both unappealing and dangerous, as the eyes have a limited ability to adjust extremes in light levels.

There are a variety of techniques for providing properly controlled daylighting—including the use of light shelves, prismatic glazing, or passive skylights. In this discussion we will examine sidelighting, the most common approach for admitting daylight into a room. For information on other methods, consult the Illuminating Engineering Society of North America's Recommended Practice for Daylighting: RP5. IESNA, 212-248-5000, ext. 112, or www.IESNA.org.

CONTROLLING THE AMOUNT OF SIDELIGHTING

The amount of daylight entering an interior from side apertures—usually windows or glass block—depends upon the width and height of the opening, the type of glazing, and the style of the control elements, as well as exterior conditions like the time of day, time of year, and whether the sky is overcast or clear. Windows, of course, allow heat to transfer both into and out of a building. Heating and cooling costs should be considered when sizing windows.

The simplest options for controlling the amount of light coming through a window use tinting, blinds and shutters, and window shades. Tinting reduces the amount of daylight passing through window glass. By tinting or coating the glass itself some of the light is absorbed by it, lowering the light in a space. An advantage of tinting is that it still retains a full view through the window although it does not ensure privacy. Tinting, if proper glazing materials are selected, also blocks some UV, but it does not alleviate the harsh shadows cause by the sun's direct rays.

Blinds and shutters use louvers to control light, and come in many forms and materials—vertical or horizontal, wood, metal, fabric or plastic. The louvered elements of both blinds and shutters are variable and control privacy and views. They work by deflecting daylight and allowing the amount of reflected and direct light entering a space to be varied. While the overall quality of light is controllable with slats, unless these are adjusted over the course of a day, the resulting sunlight will be harsh because bands of direct sunlight alternating with shadow will, depending on the time and orientation of building enter the room.



THE SIMPLEST OPTIONS FOR CONTROLLING THE AMOUNT OF LIGHT COMING THROUGH A WINDOW USE SHADINGS, SHOWN HERE, WHICH SOFTEN AND DIFFUSE LIGHT.



SUNNY DAY



CLOUDY DAY

THE DIFFUSION METHOD OF CONTROLLING DAYLIGHT AT THE WINDOW BREAKS UP THE SUN'S RAYS AND SCATTERS THEM IN MULTIPLE DIRECTIONS. DIFFUSION IS AN EXCELLENT WAY TO ELIMINATE THE SHADOWS CAUSED WHEN LIGHT COMES FROM A POINT SOURCE, SUCH AS THE SUN, AND IMPROVES ONE'S PERCEPTION OF VISUAL DETAILS. THE EFFECT OF USING A DIFFUSE MATERIAL OVER A WINDOW MAY BE BEST ILLUSTRATED BY OUTDOOR LIGHT ON A SLIGHTLY CLOUDY DAY. THE RESULT IS THAT INSIDE A BUILDING DIRECT HARSHNESS OF LIGHT IS ELIMINATED, YIELDING SOFT EVEN LIGHT RATHER THAN THE BRIGHT LIGHT THAT OCCURS ON A SUNNY DAY, WHEN HARSH SHADOWS AND HIGH CONTRAST CAN OBSCURE DETAIL.



LOOKING CLOSER AT THE CONSTRUCTION OF TYPICAL CELLULAR SHADES AND SHADINGS, ONE WILL FIND THAT THE REAR LAYER OF MATERIAL PROJECTS LIGHT ONTO THE FRONT LAYER, MUTING THE LIGHT AND ELIMINATING SHADOWS.

Light-diffusing shades, particularly those made of horizontal hexagonal cells—or honeycombs—scatter and deflect outside light by sifting it through a double layer of translucent material. They further disperse the sun's rays by means of angled surfaces, sending light off in different directions. "Such shades can shut out up to 98 percent of UV rays, and can reduce damaging heat build-up on sensitive organic materials such as wood by close to 80 percent," according to Wendell Colson, Hunter Douglas Head Of Design And Development. The shades are also available with vertical teardrop-shaped elements, which resemble draperies but function like blinds.

At the "Designing With Light" conference, a demonstration illustrated what could be achieved by doubling the layers of filtering materials. A single bed sheet hung over a window softened daylight, but not the shadows cast from outside. By hanging a second sheet an inch inside the first, almost all shadows were eliminated because light landing on the outer sheet was diffused by the time it struck the inner layer. Not only did the two layers filter harmful rays, but the resulting daylight created clearer views of interior images and details.

Beyond the bedsheet, of course, a new category of daylight control products—cellular products—have been developed over the past 15 years to create a diffusion of light through multiple layers of diffusing materials. Multiple layers of diffusing materials create a softness of light both in a room and the light emitted from the window is shadow-free. Looking closer at the construction of typical cellular shades and shadings, one will find that the rear layer of material projects light onto the front layer, muting the light and eliminating shadows.

PROTECTING LIGHT SENSITIVE OBJECTS

Steven Weintraub also offered several suggestions related to ambient light for dealing with light-sensitive objects in both museum and residential environments. First, create contrast between an object and its surroundings. Cutting down ambient light with window coverings and other methods allows you to highlight abjects without having to wash them with damaging illumination levels. Controlling ambient light in adjacent spaces means that you will not perceive the room which contains the objects as dark; the eye will not be referring sideways to stronger sources. Placing objects away from high-contrast conditions, such as between a pair of windows instead of in front of them, allows them to be seen in fuller detail, because the eye adjusts to the adjacent brightness and not the object. Another rule of thumb is to control the cumulative light on objects over time. The issue is not so much the level of light they receive periodically, but instead over their life times.

"Light may come into a room from the sides or above. I think what is important," said architect Richard Meier, "is that spaces and quality of light in those spaces must be able to accommodate things we cannot even predict today...the use of the space, the perception of the space, and the scale of the space are constantly changing; and apropos, the way the light comes in throughout the day is constantly changing."

HUNTER DOUGLAS is the world's premiere manufacturer of custom window coverings. The Hunter Douglas offering includes the following products which have been specifically developed to softly diffuse light entering at the window: Duette ® honeycomb shades, Silhouette ® window shadings, Vignette ® window shadings, Luminette Privacy Sheers ® and Serenette™ SoftFold™ shadings. Other Hunter Douglas window coverings include Brilliance™ pleated shades, Remembrance™ window shades, Jubilance™ Roman shades, Millenia™ vertical blinds, Palm Beach™ custom shutters, Country Woods ® Collection wood blinds, Beyond Woods ® hardwood blinds, Lightlines ® horizontal aluminum blinds, and Facades cornices, valances and decorative moldings.

For more information concerning the full line of Hunter Douglas products, please visit our website at www.hunterdouglas.com.

LEARNING OBJECTIVES:

- Compare the color of daylight to the colors of electric light.
- Describe the effects of ultraviolet light.
- Explain different light control methods.
- Describe how diffusion layers eliminate shadows.

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Then turn the page upside down and check your answers. Fill out the self report form on page 244 and submit it or use the Continuing Education self report form on *Record's* web site - www.architecturalrecord.com - to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS:

1. What are the main differences between daylight and electric light?

2. What are the effects of ultraviolet light on objects?

3. How does window tinting differ from louvers as light control?

4. How do multiple layers of diffusing materials eliminate shadows?

5. How could you design for ambient light to work with light-sensitive objects?

ANSWERS:

1. Daylight is a balanced blend of different wavelengths of electromagnetic radiation. It puts out a color of light that has a high proportion of blue, ranging between 5,000 and 10,000 degrees Kelvin. Electric light is also electromagnetic radiation created by passing an electric current through a filament or by electrically charging a gas or phosphor coating inside a tube. Electric light sources produce a light that is lower in blue and higher in red or yellow with a much lower color temperature than daylight.

2. Ultraviolet light appears at the short-wavelength end of the spectrum where light is particularly active. It fades colors and decays materials such as fabric, paper, leather, and wood quickly. Ultraviolet light is also used to destroy germs.

3. Window tinting blocks some light from coming in through the glass, this may include infrared and ultraviolet light. It retains the view of the outdoors, but does not provide for privacy or eliminate shade. Shades or louvers deflect light to block it partially or totally. This can create harsh contrast between brightness and shade. They also block the view looking out and looking in, which provides privacy.

4. Diffusion breaks up the sun's rays and scatter them in multiple directions. A single diffusion layer softens the daylight, but still can create shadows. A second layer eliminates the shadows from already diffused light.

5. When working with light sensitive objects, the first step is to create contrast between the object and its surroundings. Reduce the ambient light from windows or other light sources so that the object can be highlighted without a high amount of light. Make sure the objects are not in high-contrast situations such as in front of a window, so the eye can see the detail in the object. Also try to control the cumulative amount of light striking the object over time.

HunterDouglas
WINDOW FASHIONS

HUNTER DOUGLAS
2 PARK WAY
UPPER SADDLE RIVER
NEW JERSEY, 07458-0740

TEL: 1-800-937-7895

WEB ADDRESS: WWW.HUNTERDOUGLAS.COM

CIRCLE #60 ON INQUIRY CARD

Open up to the possibilities.



When you specify window coverings, you're making more than an aesthetic decision. You're also determining light control, privacy and—to an extraordinary degree—energy and maintenance costs. That's why it makes sense to turn to Hunter Douglas—a company whose innovative designs reflect a sure grasp of the total picture today.

HunterDouglas

COMMERCIAL WINDOW FASHIONS

CIRCLE 61 ON INQUIRY CARD



Gullwing luminaires seamlessly and elegantly disappear into architecture and landscape. By night, illumination is precisely controlled, with no high angle brightness or glare into neighboring property. Gullwing blurs the lines between architecture, engineering and performance, and in so doing, advances the proposition that lighting at its best, is all but invisible.

Learn more about Gullwing sconce and area luminaires at www.sitelighting.com/gwar

Gardco Lighting
San Leandro, CA
800.227.0758

CIRCLE 62 ON INQUIRY CARD

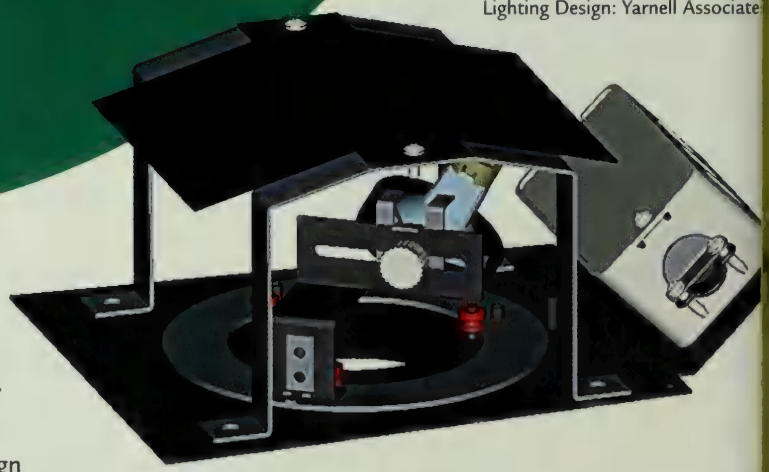
Genlyte Thomas Group LLC


Sharp cutoff of lamp
output eliminates trespass
Five highly efficient,
uniform distributions
HID lamps to 1000 watts
18" & 13" discretely
silhouetted forms
Gardco
Lighting
INVISIBILITY

An Innovative Approach to Lighting



Project: Marquette Building, Chicago, I
Lighting Design: Yarnell Associate



Kramer Lighting offers unique lighting solutions through our "project approach," working closely with designers and specifiers to create products that illuminate any commercial, industrial or retail application.

Design Challenge: Creating an architectural luminaire to accent a stunning 19th century Tiffany mosaic. The design of the 14ft ring had to encompass the lobby's centrally-positioned marble column, and be adjustable, easy to relamp and heat-dissipating.

Creative Solution: We created a lightweight luminaire that effortlessly blends with the building's décor. Our molded carbon fiber/fiberglass ring securely houses 60 MR-16 lamps with thermal-designed shields to prevent light leaks.

For more information on how to order a tailor-made lighting system or to receive the Kramer Lighting catalog featuring our full line of distinctive luminaires, call us today.

Call 401-849-5100 Fax 401-849-511
Visit Us Online @ www.kramerlighting.co

kramer lighting

An Advanced Lighting Technologies Comp

Examine the Design Possibilitie

© 2000 Kramer Lighting Middletown, Rhode Island, USA 02842

CIRCLE 63 ON INQUIRY CARD

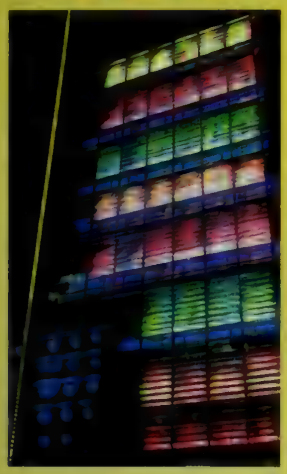
LIGHTING...



1



2



3



4

Almost every design has some historic reference, whether there is a conscious effort to make one or it occurs merely by coincidence. The Ghost Bar in Chicago (1), by Square One Precision Lighting, may not be haunted exactly, but it does seem to be a design with a reincarnated spirit: Seagram's Private Bar for the Chrysler Building, designed by Morris Lapidus in 1934, has some very similar ideas. As at Seagram's, beverage bottles are placed in vitrines over the back bar and backlit like fine artworks. Elsewhere, both bars were lit intimately and indirectly.

The Niagara Mohawk Power Corporation (2), in Syracuse, N.Y., is a relighting project that provided its own inspiration. Built in 1932, its Art Deco details were lit for only ten years before the building was blacked out during World War II. Brandston Partnership brought it back to life, adding color and additional lighting that the original architects, Bley & Lyman, might have used, had the technology been available at the time.

The exterior lighting design of the New 42nd Street Studios (3), by Anne Militello, does not seem to be inspired directly by historic precedent. It is not difficult to imagine, however, that the constantly changing light show dancing across its facade has a link to the lighted marquees of the burlesque theaters that once stood on this New York City street.

Lee Prince, of Light & Design Associates, comes right out and acknowledges that the lighted column forms in H.R. Owen Ferrari (4) were borrowed directly from Frank Lloyd Wright's 1936 Johnson Wax Administration Building. The major difference is that where the showroom ceiling is uplit from lights located on top of the column capitals, the Johnson Wax Building's columns had skylights between them. Prince didn't have this option—there is another floor above these columns.

Personally, I enjoy seeing designers incorporate such references in their work, as long as they have really done their homework and understand what they're doing and why. Those who fail to study their history of lighting often reinvent old ideas badly. *Charles Linn, AIA*

Creative uses

The New 42nd Street Studios
Vortex Lighting

Niagara Mohawk Power Corporation Headquarters
Brandston Partnership

H.R. Owen Ferrari
Light & Design Associates

Technology: Evaluating the right light for offices

Lighting resources


FUCSIA by Achille Castiglioni
FLOSUSA
1 800 939 3567 1 631 549 2745
CIRCLE 64 ON INQUIRY CARD

Creative Uses

Richard Carlson orchestrates ecclesiastical lighting for a sanctuary, collaborating with a local artist ▪ Nine is the lucky number of a new Chicago restaurant illuminated with flair

A refurbished church in Brooklyn relies on subtle lighting for a tranquil look

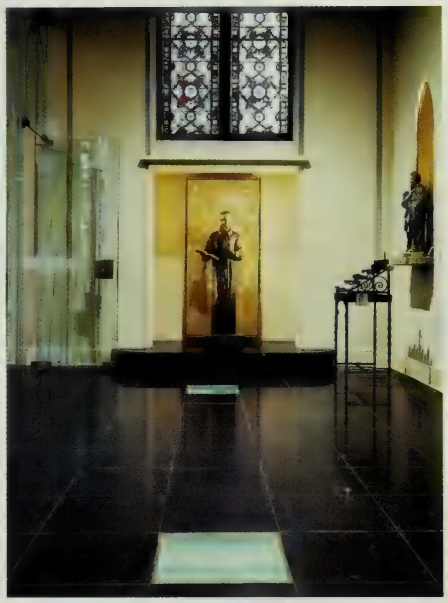
The rejuvenation of St. Boniface Church in Brooklyn, N.Y., is a project close to architect Richard Carlson's heart. As a member of the religious community known as the Oratory of St. Philip Neri—an inclusive Roman Catholic confraternity of clerics and laymen founded in 1986—Carlson and his designer wife, Helen, led a decade-long effort to restore the 1878 building as the congregation's permanent home.

From a leaky roof to a crumbling interior, the brick-and-brownstone structure required a top-to-bottom makeover. "The place was literally falling apart," recalls Carlson, design principal of Swanke Hayden Connell Architects (SHCA). "The oratory distinguishes itself as a community excelling in quality liturgy, beautiful music, and inspirational surroundings. We wanted to create an engaging, light-filled space that would be welcoming to all people."

Steering the congregation's renovation committee, the Carlsons orchestrated an ambitious plan to overhaul the 5,000-square-foot church, an adjacent community house, and two residences. To meet the projected $1.5 million budget, parishioners relied chiefly on member donations and small contributions from the business community. SHCA, with Carlson taking a lead role doing much of the work with his own hands, donated time and talent.

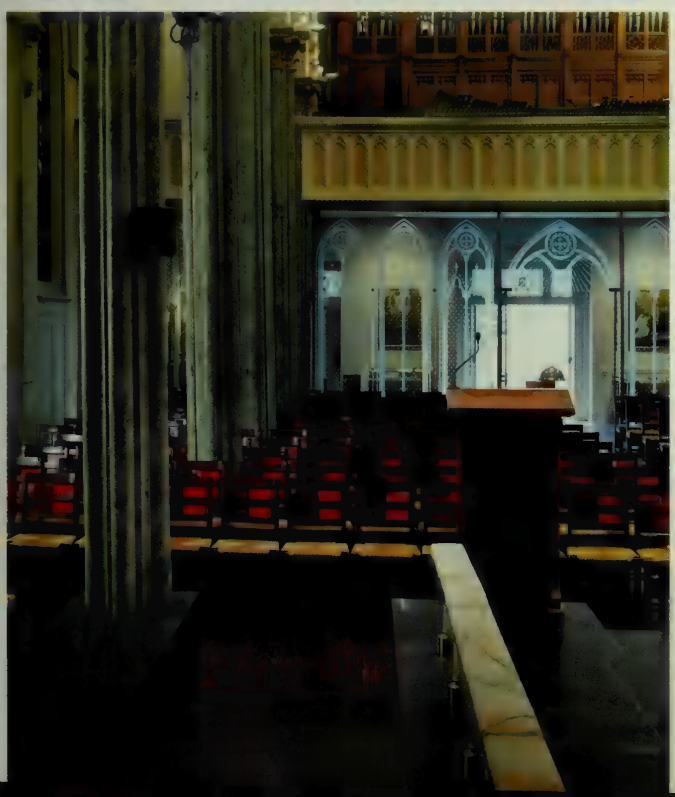
"From the beginning of the project, access to the church complex for people who are physically challenged was a top priority," says Carlson. One of the first major improvements was to provide an entry ramp to the church. The sanctuary was also redesigned with two ramps that flank the altar, making all aspects of the liturgy wheelchair accessible.





Each Station of the Cross is backlit with neon (above) and set into the floor to ease wheelchair access (right).

Halogen uplights and accents team with theatrical fixtures in the sanctuary.



Lighting plays a key role in enhancing the ecclesiastical environment for parishioners. Melding original art and elements of liturgical ceremony, the Stations of the Cross at St. Boniface comprise 14 backlit, etched-glass squares set into the floor. The Stations allow intimate contemplation and ease of mobility for wheelchaired worshippers, while threading a subtle design motif throughout the space.

To create the peaceful points of light, Carlson collaborated with artist Amy Kasindorf of LivArt, exploring a range of lighting options, including incandescent, fluorescent, and neon fixtures. After building and testing a series of mock-ups, the design team decided most configurations were either too bright or made the installations "look like fish tanks," Kasindorf says. "The lighting was too obtrusive for pieces intended to support meditation."

In the end, the designers opted for the look of daylight, reiterating the quality of light flowing through the sanctuary's restored stained-glass windows. Each sculptural Station panel is constructed of three layers of glass, all carved to give the narrative images depth and a subtle range of color. Illumination is supplied by neon—from which the mercury was removed—set within a channel along the perimeter of each panel. "The light is cast evenly and held behind the glass, without making the panels glow too brightly or theatrically," says Kasindorf. Each Station is a self-contained sealed unit, covered by half-inch tempered safety glass that is removable for maintenance.

Throughout the church, additional illumination by Susan Brady Lighting Design complements interior details such as the restored onyx communion rails, a refurbished organ, new flexible congregation seating, and a 10-foot-tall etched glass panel that separates the narthex and sanctuary. The glass panel provides a much needed acoustical buffer while admitting additional daylight.

Two integrated lighting systems work in tandem at St. Boniface: an architectural system to illuminate the building's envelope

and a flexible theatrical system to emphasize the religious rituals taking place primarily around the altar.

Halogen uplights provide a wash of even illumination for the soaring, vaulted ceilings. Mounted at the column capitals, 500-watt units illuminate the central vault, while 150-watt units illuminate the side vaults. Additional halogen MR16 accent lights are affixed to the central column capitals to highlight the decorative murals between the vault spring points.

Above the altar, a stained-glass window was refurbished and backlit with neon to simulate daylight. Statuary within recessed niches is highlighted with MR16 accent fixtures. Recessed downlights provide ambient light below balcony areas.

Theatrical booms mounted along six columns near the front of the sanctuary accommodate theatrical luminaires. A combination of 24 ellipsoidal and fresnel fixtures highlight the altar area. A theatrical dimming system with preset scenes controls both architectural and stage lighting components. Remote scene selectors are located at the lectern and presider's chair, so that lighting scenes can be adapted throughout the mass in order to redirect focus and create drama.

For Carlson, a poignant element of the restoration is the tranquil garden now adjacent to the church, which replaced a cement breezeway. It is dedicated to his wife, who passed away during the renovation.

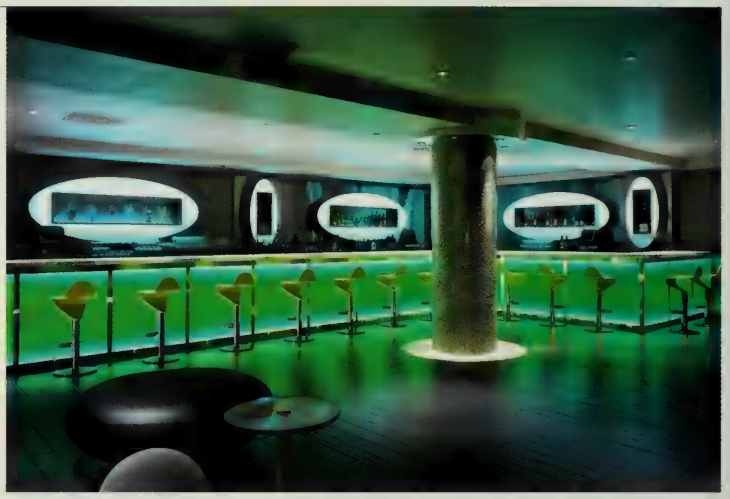
The refurbishment of St. Boniface received the New York Americans with Disabilities 2000 Achievement Award for outstanding design. Carlson credits two members of the clergy, the Very Reverend Dennis M. Corrado and Father Mark Lane, for their valuable contributions to the design process.
William Weathersby, Jr.

Bands of color-changing neon give a new steakhouse the ambience of a nightclub

Michael Morton and Scott DeGraff have been friends since they were both nine years old. When they recently launched their third hospitality project—an upscale American steakhouse in the Daniel Burnham–designed Randolph Place in Chicago—they decided to call it Nine, in honor of the starting point of their 27-year-long friendship.

The partners' previous ventures were nightclubs. In the 19,000-square-foot Nine, they sought to combine the comfortable eatery concept of a classic American steakhouse with the flash and color of a night spot. "It is a place where people can dine as well as socialize, a place to see and be seen," says DeGraff, who brings a background as a real-estate lawyer to his entrepreneurial role. Morton's family, meanwhile, owns the famous Chicago-based chain of restaurants of the same name. To realize their vision for Nine, the partners collaborated with Square One Precision Lighting and Art Miner Design.

Influenced by their nightlife backgrounds, where, as DeGraff explains, "we pump so many bodies through the space," the team used a design approach that juxtaposes imposing, luxurious materials—ash, stainless steel, and granite—with strategically placed, colorful feature attractions. Greeted by a 16-foot steel-lined waterfall set against a backdrop of limestone, patrons walk along an elevated runway to enter the lounge. There, a 40-foot-long ash-and-stainless-steel bar is complemented by columns covered with hand-applied mirror mosaics. Plasma screens run continuous videos and stock market updates. The double-height main dining space is organized around a central circular champagne and caviar bar. Constructed of granite and stainless steel, the bar has an inner ring lined with ice to showcase the beluga.



The watering hole called Ghost features a bar of ribbed glass backlit with neon.

A silver-leafed vaulted ceiling is uplit with neon bands programmed to change colors.



Lighting that envelops the ceiling is used to vary the mood. Scooping out the second story around two central structural pillars above the bar, the design team inserted a 25-foot-high vaulted ceiling that is silver-leafed to reflect illumination. Four bands of concealed neon uplight the cove. Computer-programmed to change colors at least three or four times during the evening, the illumination reflects off the mirrored pillars, steel surfaces, and ice. "We usually start the evening with cool colors and move on to warmer ones," says DeGraff.

MR16 downlights recessed into the ceiling are dimmed or brightened to match the mood and color of the moment. Shelves around the central column are backlit with tubular fiber-optic lines that incorporate transformers in the bases.

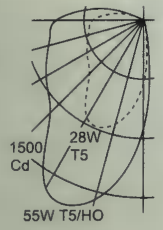
On the second floor, a private function room becomes a weekend bar that's called Ghost, since it disappears during the week "like an apparition," says DeGraff. Patrons are led into the bar from the elevator by floor-mounted, fiber-optic backlights. Inside, the dominant colors are silver and gray, in keeping with the ghostly theme. The modern furniture is sculptural; artwork consists of photographic negative portraits from the 1920s. At center stage is the long bar. A crushed-glass-and-terrazzo bartop is supported by sheets of ribbed glass that are backlit at the floor and counter levels with strips of green neon for a surreal glow.
Nayana Currimbhoy

size matters...

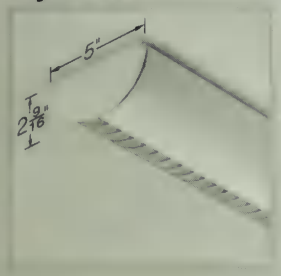
performance, too™

elliptipar's T5 linear fluorescents ... very low profile ... simple elliptical housing ... radial baffles ... matte white finish ... luminaires that blend into their surroundings ... for corridors, art walls, marker boards, classrooms, labs, library stacks, grocery aisles, warehouse stores.

- new extra small reflector engineered for T5 and T5HO lights entire wall evenly
- adjustable aiming
- 1-lamp or 2-lamp styles for lighting vertical surfaces; 3-lamp style adds uplighting
- 1-lamp style – a cost saving alternative to the slot
- integral ballast, dimming optional
- stem, cable and cantilever optional
- continuous rows, quick connect wiring
- all aluminum and stainless steel

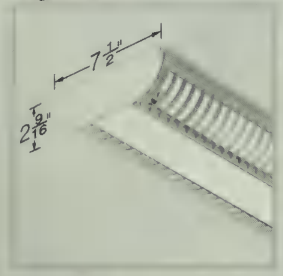


Style F144



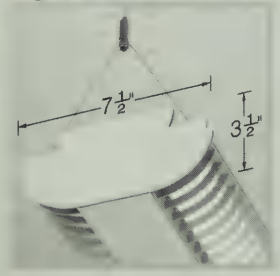
one way*

Style F145



two way*

Style F146



three way*

***our way**

Patents pending

elliptipar

...there is no equal™

114 Orange Avenue
West Haven, CT 06516
203.931.4455 • Fax: 203.931.4464
www.elliptipar.com

CIRCLE 65 ON INQUIRY CARD

Choreographed illumination of a rehearsal center's facade creates its own street theater on Broadway

By William Weathersby, Jr.

Bright lights and Broadway share a long, intertwined history. From neon billboards blaring advertisements in Times Square to chaser lights circling the names of stage legends along backlit marquees, vibrant illumination has been the signature look of New York City's legendary theater district for more than 80 years. Now a new rehearsal building situated on a revitalized stretch of 42nd Street has elevated exterior lighting in the area to a new level of sophistication. Integrating finely etched architectural form with expressive, computer-controlled lighting, the New 42nd Street Studios building presents a shimmering collage of changing color that creates its own version of street theater.

One of the last legs in the decade-long redevelopment of the block of 42nd Street between Seventh and Eighth Avenues, the Studios complex is a $29.6 million, 10-story tower designed by Platt Byard Dovell Architects, with exterior lighting by Anne Militello of Vortex Lighting. In addition to serving as the new headquarters of the New 42nd Street, Inc.—the nonprofit organization mandated by the city and state to resuscitate the down-at-the-heels strip—the center houses 14 rehearsal studios for dance, music, and theater; a 199-seat black-box theater; a ground-floor retail space; and 20,000 square feet of office space for performing arts groups, including the Roundabout Theatre Company and the Williamstown Theater Festival. Sharing the street with restored Broadway houses such as the New Amsterdam and New Victory—along with newer venues including the AMC cineplex and Madame Tussaud's Wax Museum—the Studios tower is the first building on the block "built specifically for a range of art forms, and for both nonprofit and commercial uses," says Cora Cahan, president of New 42nd Street, Inc.

The Studios complex rises on the site of the former Selwyn office building and an adjoining one-story parcel. At ground level, the building houses a lobby entrance for the adjacent American Airlines Theater, which occupies the newly restored interior of the former Selwyn Theater, hugging 43rd Street. Originally, the Studios design was to incorporate the six-story facade of the office building, but the brick sheer wall collapsed prior to construction.

From its earliest design development phase, the Studios tower was conceived as a structure that could serve as a bridge between the street's illustrious theatrical past and its multimedia future. "The new building tries to be a work in itself, not a pastiche," says principal architect Charles Platt. "It struggles against what we see as the artificiality and contrivance elsewhere in the redevelopment of 42nd Street."

Rather than cloaking the facade in historicism or overt theming, the architects sought an architectural form that expresses the activities taking place within—the creation of theatrical art. "It is something akin to a factory for the arts—concerned with the production rather than consumption of entertainment," Platt says. "The parti we derived from that is very straightforward and rigorously controlled." Barnlike rehearsal spaces with ceiling heights of 13 feet or more are stacked in the aluminum-and-glass curtain-wall tower, supported by a compact, brick-clad service core housing elevators, stairs, plumbing, and HVAC. "Because of the classification of the building, we were freed from the requirement of having a fire-rated spandrel, so the curtain wall really is glass from floor to ceiling, which is rare in New York," notes architect Ray Dovell. "Passersby

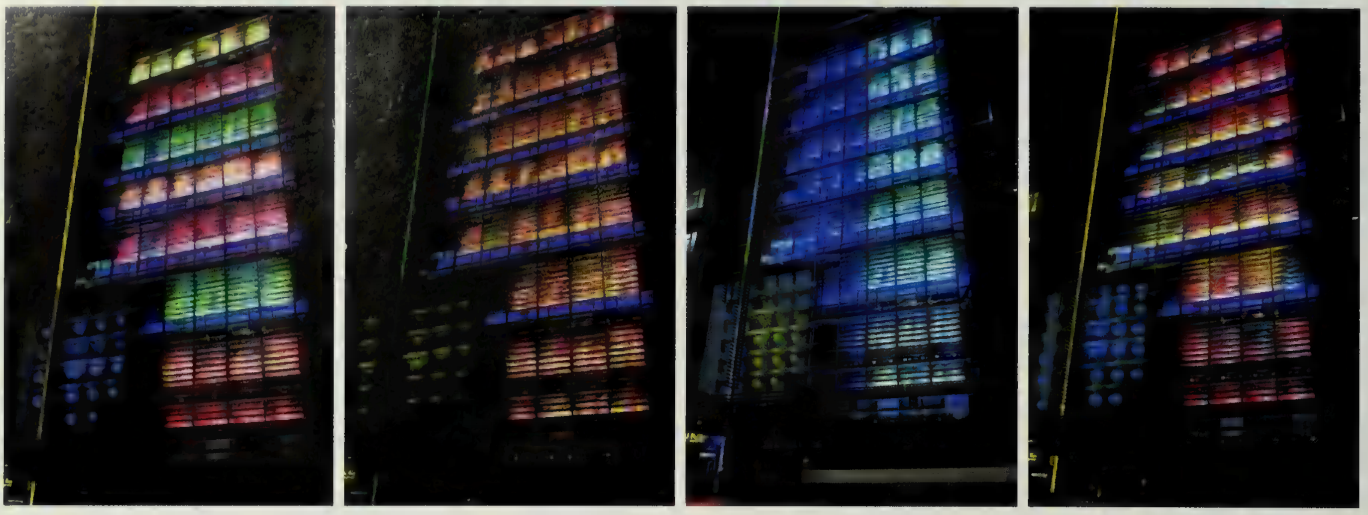


Contributing editor William Weathersby, Jr., is a freelance writer based in Westport, Conn. He frequently writes about lighting design.

Project: *The New 42nd Street Studios, New York City*
Architect: *Platt Byard Dovell Architects—Charles Platt, AIA, Ray Dovell, AIA, design principals; Phillip Turino, AIA, project manager; Elissa Icso, AIA, project architect; Sherri Scribner, job captain; Eric Holterman, AIA, Susan Frocheur, Tom Gilman, Mark Verzosa, Georg[illegible] Prado, Silvia Ajemian, Victoria Somogyi, project team*
Lighting designers: *(exterior) Vortex Lighting—Anne Militello, principal; (marquee, interior) Johnson Schwinghammer—William Schwinghammer, principal*
Consultants: *Goldman Copeland Associates (mechanical/electrical engineer); Anastos Engineering Associates (structural engineer); James Carpenter Design Associates (exterior glass consultant); Ryan O'Gara (lighting programmer)*



Creating a collage of light in front of the facade's curtain wall, an armature of catwalks and steel fins is lit by 300 computer-controlled fixtures.



can peer in to see the creative artists at work."

Exterior lighting plays a vital role in the creative life of the building. Addressing the redevelopment guidelines for 42nd Street properties, which required the extensive use of exterior signage and lighting, the architects chose to express the entire building as a lighted form. "At night, the building itself becomes a sign," Platt says. "That's really its essence."

Militello joined the project early in its design development phase. With a background that encompasses lighting assignments for Broadway, Off-Broadway, concerts, and Walt Disney theme parks, she approached the Studios building as a chance to create an abstract color field of changing light. "The architects were very interested in integrating the lighting with architectural forms, rather than covering a static building surface with an applied wash of light," she says. "It's not only that the lights are moving and programmed in unusual ways. The materials that the architects have developed to work with the lighting are very unusual as well."

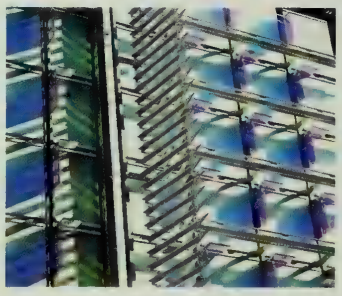
Playing off the idea of a collage (besides his work as an architect, Platt is an artist whose medium is collage), the architects designed a steel armature that shields the curtain wall and serves as a varied form to manipulate electric light. The design team initially experimented with a range of materials, including textured and ribbed glass, before settling on a grid of perforated, stainless-steel fins, or blades. The blades occur on each of the upper seven floors of the building, separated vertically by a steel support structure that forms individual bays.

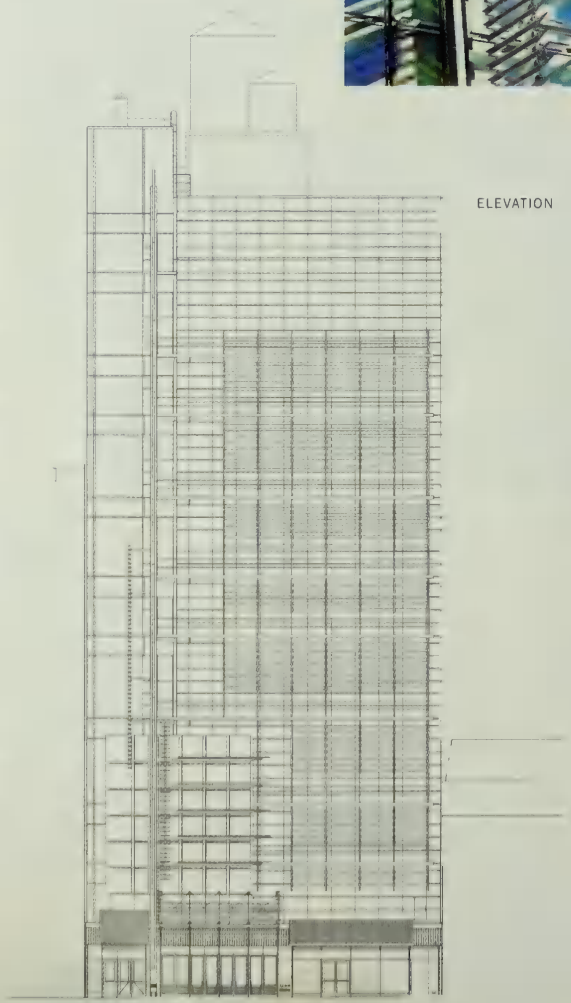
Militello's lighting plan layers illumination from a variety of fixture types. The first layer of light is created within the plane of the studio windows. At night, translucent shades—functioning like theatrical scrims—remain pulled down inside the studios. Custom fluorescent T5 PL will wash fixtures mounted between the vertical window mullions uplight the shades. Fitted with custom color gels and spaced end to end, the fixtures create an opaque, glowing backdrop that serves as the "background canvas of the lighting collage," Militello says.

The next layer of light engages the facade's armature, with points of light laid out along the steel grid. "On every level outside the building is a 3-foot-deep catwalk," Militello explains. Besides accommodating maintenance, "they are great locations to hide mounted lighting fixtures." Each floor is divided into six bays, with a total of 12 fins per floor attached to the armature's mullions. Each bay incorporates three different colors of light. Two 575-watt PAR fixtures housing halogen T-lamps are fitted with dichroic glass. Each bay also features one color of metal halide for base illumination.

"The steel blades are perforated and scratched, so their rough

The symphony of light (above) calls upon automated luminaires, fluorescents, PAR lamps, and HID fixtures. The dichroic glass-embedded screen (right) manipulates daylight.







Introducing the third generation of the Universe Collection™ from AAL. A complete family of decorative, yet functional luminaires that transcend architectural styles past and present. The fixtures are scaled in three sizes with more forms, configurations and metal hood options to give you an expanded design palette.

UNIVERSE COLLECTION™

ARCHITECTURAL
AREA
LIGHTING

714.994.2700
fax: 714.994.0522
www.aal.net

CIRCLE 66 ON INQUIRY CARD



Linear indirect/direct fluorescents supplement the daylight streaming through floor-to-ceiling windows in one of 14 rehearsal studios (left). The black-box venue (below) is equipped with an array of theatrical fixtures.

surfaces reflect and throw light all over the place," Militello says. Stacked parallel to the face of the building, the blades are mounted beginning about six feet up on each floor. Blades measure from 18 to 24 inches front to back and are set at 30-degree angles from the facade.

The third, most animated layer of illumination is provided by automated, intelligent luminaires mounted on stanchions above the marquee. Five luminaires housing HID lamps graze the steel armature—three fixtures light the blades and two light the box behind. Set five feet out from the facade, the fixtures feature dichroic color-changing elements that can crossfade to produce different colors.

A 175-foot vertical light spire on the west side of the building provides a signature look. Technically called a prismatic lighting guide, the spire is constructed from a series of connected linear sections of hollow acrylic tubes, lined with optical film to emit light along the length of the spire. Automated luminaires fitted with dichroic HID lamps feed into the spire, allowing it to change color.

Armed with the array of more than 300 fixtures and a palette of 256 colors from which to work, Militello choreographed nightly computer-controlled light shows that animate the building facade. Aided by lighting programmer Ryan O'Gara, Militello spent many long nights standing across 42nd Street from the Studios. Communicating via headset with O'Gara, who was perched four stories up controlling the theatrical lighting board, she called out cues and mapped out lighting sequences in a notebook.

"With lighting effects, you always have to experiment," she says. "Light has properties that change with different conditions, and you can get unexpected effects that can be a lot stronger than they look on paper."

The resulting street theater, which envelops the Studios building every night from sundown to 1 A.M., incorporates more than 500 individual lighting looks. On nights when most Broadway theaters are closed, the lighting features slower fades of morphing patterns and color. On busier weekend evenings, theatergoers are engaged by pulsating patterns that change the look of the grid every few seconds.

Even during daylight hours, the Studios tower embodies a play of light. In the lower left corner of the facade, a 30-by-30-foot grid of floating glass panes creates a ghost image where the old Selwyn facade once stood. Collaborating with artist James Carpenter, the architects



inserted pieces of dichroic glass within the grid to to create a kinetic play of light that projects onto the building structure and sidewalk.

Inside the building, rehearsal halls awash with sunlight are supported with dimmable direct/indirect fluorescents set in linear runs. MR16 spotlights illuminate hallways, which feature colorful wall supergraphics designed by Pentagram. Interior lighting was designed by Johnson Schwinghammer. "Interior illumination was meant to support the pared down nature of the building, serving the needs of the artists at work," Platt says. And in the black-box theater, New 42nd Street vice president Chris Buckley specified the theatrical rig including PAR lamps and ellipsoidal reflectors. Ambient lighting is provided by MR16s.

It is Militello's engaging exterior lighting that transports the artistry outside. Rarely has a rehearsal hall come to life with such streetside showmanship. ■

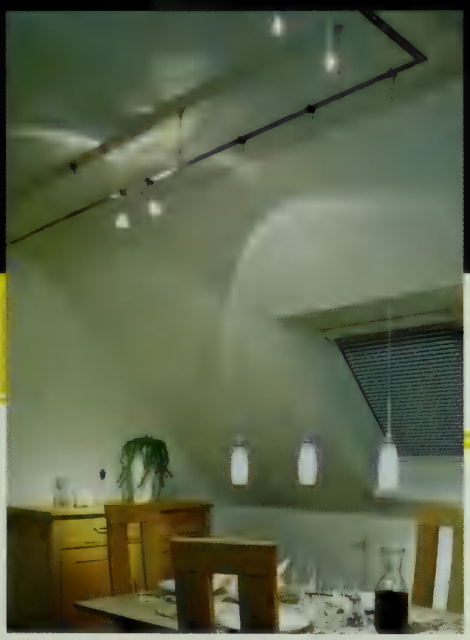
Sources

PAR fixtures: *Altman*
Metal-halide fixtures: *Sterner*
Fluorescent T5 fixtures: *Elliptipar*
MR16 fixtures: *B-K Lighting*
Automated luminaires: *High End Systems, Irideon*
Prismatic lighting guide: *LightPipe*
Indoor indirect/direct fluorescents: *Zumtobel Staff*

BRUCK

LIGHTING SYSTEMS





BOA

Dual circuit. Greater lighting options.

Bruck Lighting introduces BOA, a low profile ***two-circuit*** track system with dual switching ability listed for up to 600 watts. The system can be suspended or semi-flush mounted, installed vertically or horizontally. Finished in chrome or matte chrome.

All Uni-Light fixtures can be utilized with BOA as well as all seven other systems manufactured by **BRUCK.**

714.424.0500

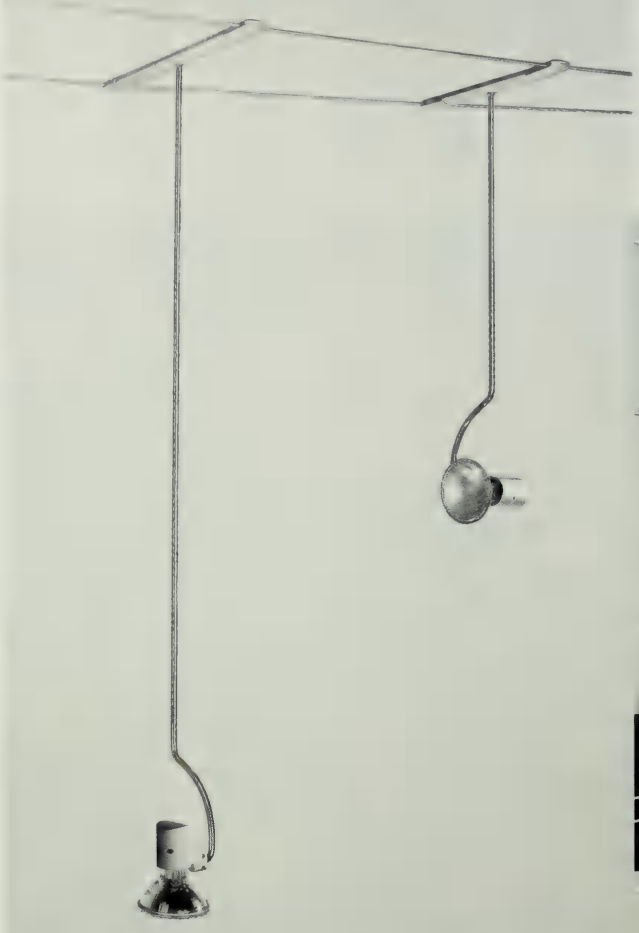
714.424.0505 Fax

Costa Mesa, California

www.brucklighting.com

CIRCLE 67 ON INQUIRY CARD

Provides General Indirect And Spot Direct Lighting In One System



Bridge Spot with
25 1/2" or 43"
chrome stems
75W PAR 30 Halogen



Bridge Spot cable heig
75W PAR 30 Halogen



Can be installed
ceiling to ceiling,
ceiling to wall

Can be installed
wall to wall

Bridge screen
reflects light
upward or
downward







Bridge wall cable
holder allows a
cable angel change
of 45° horizontally
(shown) or
10° side to side

The Bridge Cable System allows for versatile and innovative design in small or large areas. There is no need for transformers, so you can create a system 10 ft or 100 ft long without the hassle of power loss over long distance runs. Lighting elements mount on UL approved parallel cables. Each PVC covered cable consists of two circuits with maximum wattage of 1800 watts per circuit (maximum wattage per system is 3600 watts). The Bridge Cable System can be mounted wall to wall, ceiling to ceiling or ceiling to wall and provides the opportunity to do single or double switching and dimming.

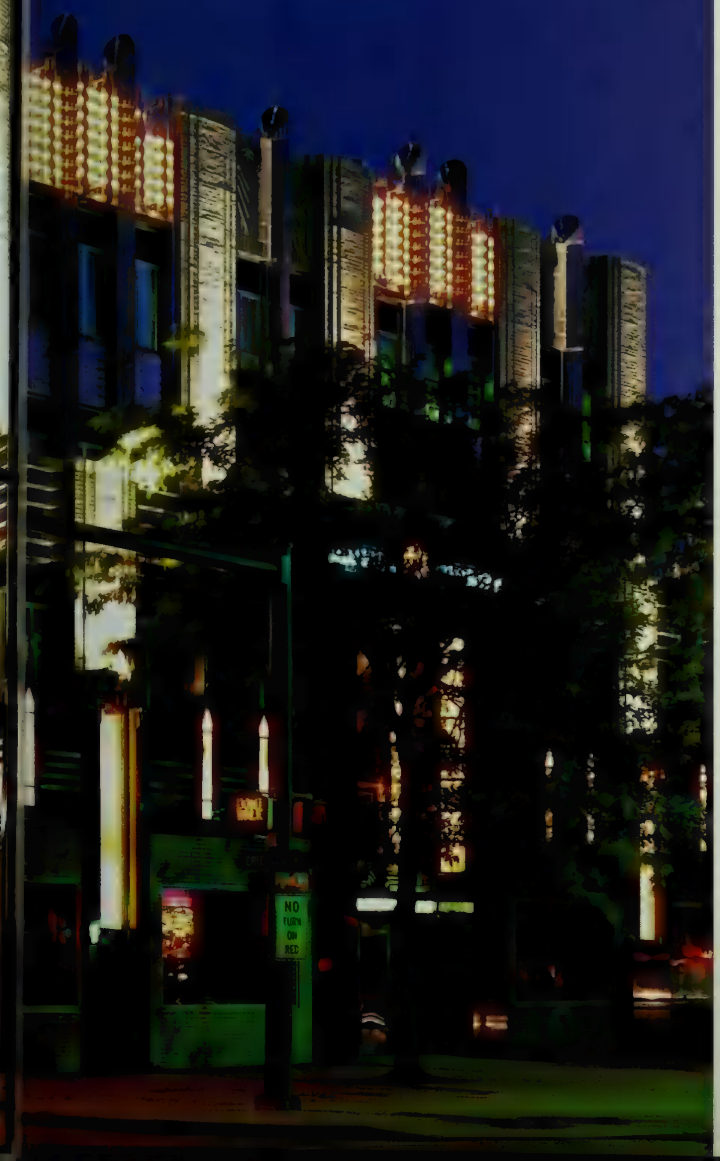

alogen Reflector
rovides uplight and
iffused downlight
50W Halogen bulb
cluded.
Innovative, versatile line voltage cable system
ETL
BRIDGE SYSTEM
USA Distributor:
H. America Inc.
109 Kenosia St.
Danbury, CT 06514
tel: 203 407-8000
Fax: 203 407-0066
e-mail: info@nemoitalianaluce.com
Check our web site for your local distributor / www.nemoitalianaluce.it
NEMO ITALIANALUCE
GRUPPO CASSINA
CIRCLE 68 ON INQUIRY CARD

A restored, relit Art Deco icon returns the power of light to downtown Syracuse





Niagara Mohawk's headquarters is a dazzling example of Art Deco, completed at the height of the period, in 1932. The *Spirit of Light* was the winning entry from a contest, held then, to name the sculpture installed over the building's main entry.



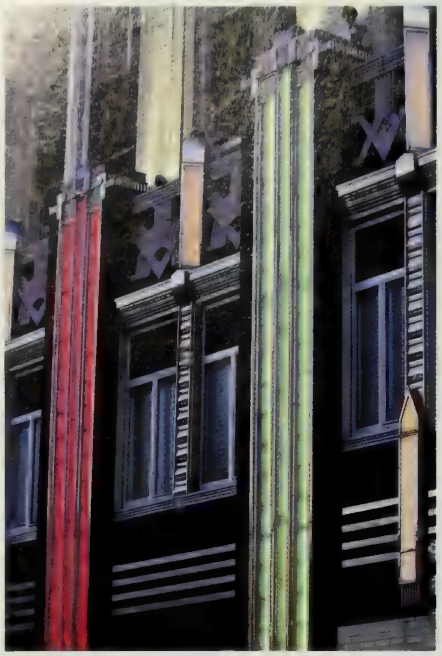
By Charles Linn, AIA

The Buffalo architectural firm of Bley & Lyman was masterful at borrowing elements from different historic periods to project an image for its clients. For example, an apartment tower by Bley & Lyman, published in RECORD in March 1932, the same year the firm completed its Art Deco headquarters for the Niagara Mohawk Power Corporation, was festooned with massive Gothic detailing. These sturdy living quarters surely made the owner and tenants feel regal, no matter that the spires and pointed arches were imposed on a very un-Gothic X-shaped plan.

In the late 1920s, rural electrification was just gaining momentum in many parts of the country. When a company like Niagara Hudson, as Niagara Mohawk was then known, put a plant on-line, they often found themselves sitting on huge surpluses of generating capacity. To sell power, they opened showrooms intended to dazzle prospective consumers into becoming rate payers. These showcased such things as model kitchens decked out with complete assortments of revolutionary electrical appliances: ranges, refrigerators, water heaters, mixers, toasters, lighting, and even garbage disposals.

One of Bley & Lyman's specialities was the design of these buildings, and the firm even wrote an article called "Planning Sales and Office Buildings for Public Service Companies," which was published by RECORD in December 1932. One of the retail stores by Bley & Lyman featured in the article was a small Art Deco showroom in Niagara, N.Y. A night shot of the building shows brilliantly backlit glass pilasters where one would expect to see structural columns, giving the impression that the building was supported by columns of light. It is hard to imagine an architectural style better suited to impressing Niagara's

Project: *Niagara Mohawk Headquarters Exterior Lighting*
Owner: *Niagara Mohawk Power Corporation*
Lighting designer: *Brandston Partnership—Howard Brandston, designer; Kevin Simonson, coordinating designer; Brooke Carter, Burr Rutledge, project assistants*
Architect: *MacKnight Architects—Steve MacKnight*
Electrical engineer: *NMPC Facilities Technical Support—Larry Hogan, Vern Schmitz, electrical design*
General contractor: *Burns Electric Co.*



The lighted pilasters of blue, red, and green neon, are covered by molded glass, which was made by Steuben. The color of the neon can be changed using the same dimming system used for altering the color of the fluorescent in the tower. Metal-halide uplights graze the brickwork. These were an addition to the original lighting design.

customers with the notion that the future would be bright and it would be electric—the perfect parti for a company eager to show it was progressive and used up-to-the-minute technology. The forms and lighting of Niagara Mohawk's headquarters are closely related to this showroom by Bley & Lyman, except that the headquarters building is much more elaborately detailed and done on a grand scale. The architects added setbacks and a tower to create a ziggurat shape. They included a stainless-steel bas-relief sculpture over the entry and incorporated many more backlit glass details and uplighting. Like the smaller showroom, it retained the glass pilasters and blazing showroom windows at street level. Legend

LIGHTS INSIDE THE TOWER MADE THE GLASS SO HOT IT SIZZLED IN THE RAIN.

has it that the incandescent lights produced so much heat that the glass towers sizzled during rainstorms.

Like the illumination on many buildings, the lights that brightened Niagara Mohawk's headquarters were extinguished during the blackout in World War II, and most remained off after the war. A few years ago Niagara Mohawk's executive vice president and COO Darlene Kerr started a drive to relight the headquarters. "They are a very socially responsible company," says Howard Brandston, of Brandston Partnership,



Solitaire™







KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

CIRCLE 69 ON INQUIRY CARD

www.kimlighting.com





Gelled fluorescent was used to backlight the transparent tower panels. Red, green, blue, and ungelled lamps were used, so that through a dimming system the tower can be changed to any color. Metal-halide and incandescent spots located across the street from the building were used to place soft highlights on the parapet details.

whose firm relit the building "and recognized the value this work would add to the community."

Relighting the landmark

Project lighting designer Kevin Simonson reiterates what has become a well-accepted philosophy for relighting buildings of architectural significance: "We tried to retain the original spirit of the design but at the same time to do things we think the original designers might have done if they had our technology."

The building's most prominent features are its internally illuminated tower, which also functions as the elevator penthouse, and the stainless-steel *Spirit of Light* sculpture that stands over the entrance to the building. The glass panels at the corners of the tower and the panel behind the *Spirit of Light* were originally lit by hundreds of incandescent lamps. These were replaced by banks of 3500K, 32-watt fluorescent strips. Red, green, and blue gels were added to most of the lamps, though some were left ungelled, so that through the use of a dimming system virtually any color of light could be mixed. Because blue gels don't transmit as much light as green and red ones, twice as many blue lamps were used as any other single color. "Finding the right place for each bank was one of the hardest jobs," says Simonson, because the structural steel that held the panels in place restricted both access and placement points, and the fluorescent strips had to be held back from the interior surfaces of the panels so that the colors could mix evenly.

Three backlit Steuben glass pilasters flanking each side of the front entry to the building have been internally illuminated using red, green, and blue neon. These are also connected to the dimming system, so that virtually any color of light can be mixed. Smaller vertical elements, called candles, were backlit using 130-volt clear incandescent sign lamps.

Several additions were made to enhance the lighting design. One was a series of 100-watt metal-halide PAR38 fixtures inside custom housings designed by architect Steve MacKnight, which place grazing uplight on brick sections of the pilasters. Uplights were also added to the top of the canopy over the main entry to the building, which wash a stainless-steel grille that is mounted beneath Niagara Mohawk's sign. To keep the profile of the building from disappearing in the night, metal-halide and incandescent floodlights were installed on a building across the street from the main elevation, placing a soft, even wash of light along the parapet. The two different sources were mixed to get the shade that the designers felt was best for bringing out the color of the building's brickwork. A metal-halide framing projector was focused on the *Spirit of Light* figure.

FOUR COLORS OF FLUORESCENT CAN BE MIXED TO TURN THE TOWER ANY COLOR.

The relighting of the Mohawk Niagara building has uplifted the spirit of city and surrounding county so much that they have decided to relight part of the downtown district, and Niagara Mohawk has commissioned Brandston Partnership to produce a master lighting plan for it. That, says Brandston, "is a good example of how much a single thing can heighten civic pride. Just from the action of one group, others say, 'Wow, if they can make this one place so wonderful, think what can we do.'" ■

Sources

Metal-halide PAR accents: *KIM Lighting*
Metal-halide architectural flood lights: *KIM Lighting*
Metal-halide architectural framing projectors: *Arc Sales*
Incandescent PAR architectural spots: *Sterner Lighting Systems*
Fluorescent strips: *Columbia Prescolite*
Theatrical dimming system: *Rosco/Entertainment Technology*
Neon: *Olsen Signs & Graphic*
Exterior fixture restoration: *Burns Electric Co.*
Theatrical gels: *Rosco*
Lamps: *Philips, General Electric*



THE ORIGINAL CAST LIGHTING ™

6120 DELMAR BLVD • ST. LOUIS, MO 63112
314.863.1895 • FAX 314.863.3278
www.theOCL.com

CIRCLE 70 ON INQUIRY CARD



CIRCLE 71 ON INQUIRY CARD



Vetreria in Murano

The **deMajo** Collection

Designer **Oriano Favaretto**

Girasole includes table, wall and ceiling designs with white, amber, light green and light blue glass

illuminating experiences

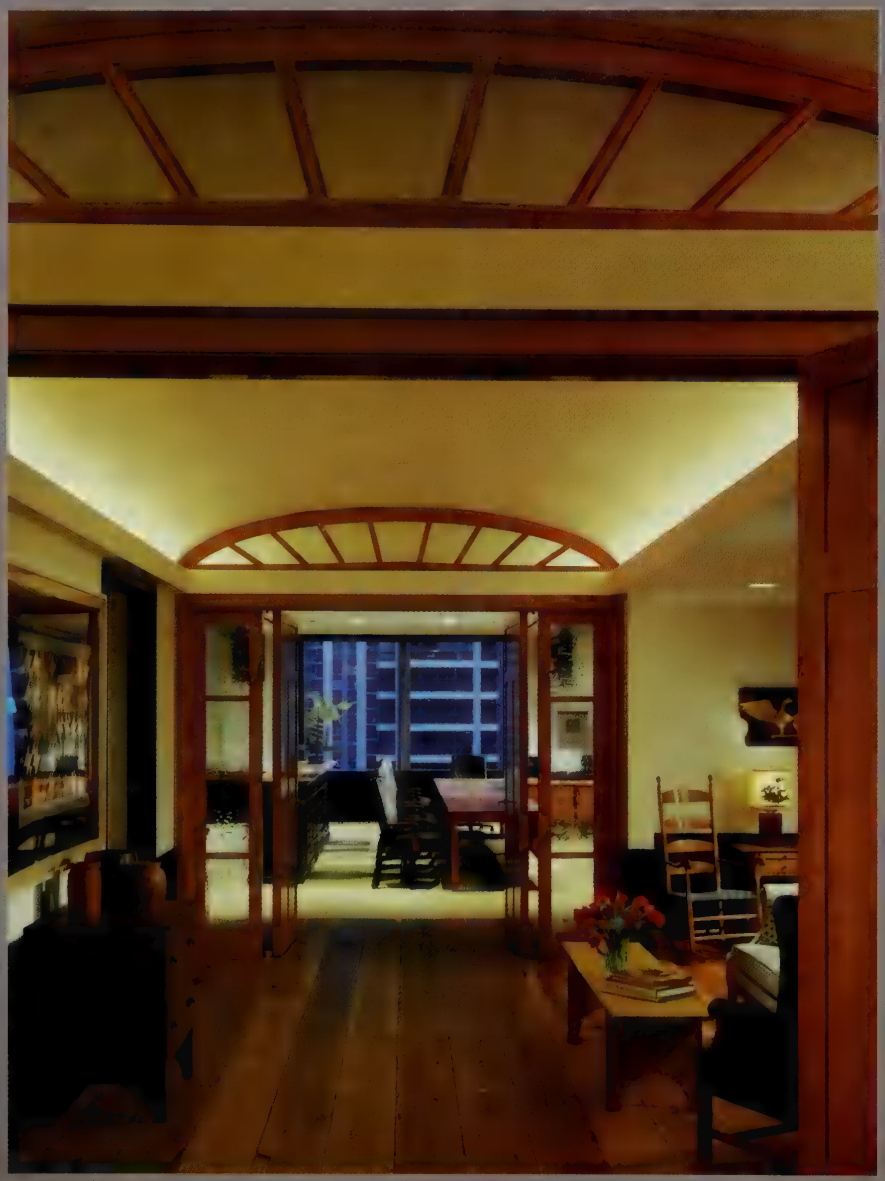
233 Cleveland Avenue ▪ Highland Park, NJ 08904
Phone (732) 745-5658 ▪ Fax (732) 745-9710

CIRCLE 72 ON INQUIRY CARD

products

A Tradition of Innovation Continues...

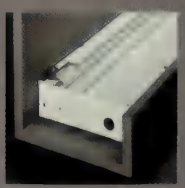
people...products...technology



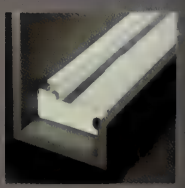
A Difference You Can See

Litecontrol concealed cove systems make the difference. Simple, yet elegant lighting technology. The new Cove-30™ system and its smaller cousin, the Cove-25™ system offer an unprecedented range of lighting design and installation choices for concealed coves. One simple, yet highly efficient, fixture design offers a small (and a smaller) cross-section. Four lamp types. Seven lumen output choices. Three mounting angles (vertical or horizontal planes). Extremely low-angle forward throw. Housing length choices (2-, 3-, 4-, 6-, and 8-feet), corner kits, and pre-wiring choices.

What more could you ask for in a concealed cove system?



Cove-30
(T8, T5, T5HO, CF)



Cove-25
(T5, T5HO)



2-lamp T5HO



1-lamp T5HO

Visit us at **www.litecontrol.com** or ask your Litecontrol Representative for more details.

an employee owned company

LITECONTROL

LITECONTROL
100 HAWKS AVENUE HANSON MA 02341 781 294 0100 FAX 781 293 2849
info@litecontrol.com www.litecontrol.com

CIRCLE 73 ON INQUIRY CARD

Shapely columns and circles of light echo the curves of luxury cars on display in a London showroom

By Nayana Currimbhoy

In the H.R. Owen Ferrari showroom in London, shapely architectural forms and pools of light complement the curvaceous sports cars on display. For architect Alex Pickford, of the London firm Gooch Webster, and lighting designer Lee Prince, a partner at Light & Design Associates, the mandate was to design a clean, well-lit environment that put the flashy automobiles on center stage during the day. Shifting gears to a more theatrical evening look, the architects orchestrated a dramatic play of light to capture the attention of window-shoppers.

"It's after work that people really linger along the street of storefronts and peer inside," says Price. The designer's exuberant illumination at Ferrari provides passersby with plenty to look at: a space radiant with glowing pools of white light, a mysterious, hovering disk, and a choreographed dance of spotlights framed by windows outlined with lights.

Housed within the 3,200-square-foot ground-floor space of a new building in London's Docklands business district, the showroom features 20-foot-high ceilings with a small office mezzanine to keep the auto display area open. To accommodate three structural columns that inter-

Nayana Currimbhoy is a New York City–based freelance writer and frequent contributor to RECORD LIGHTING.



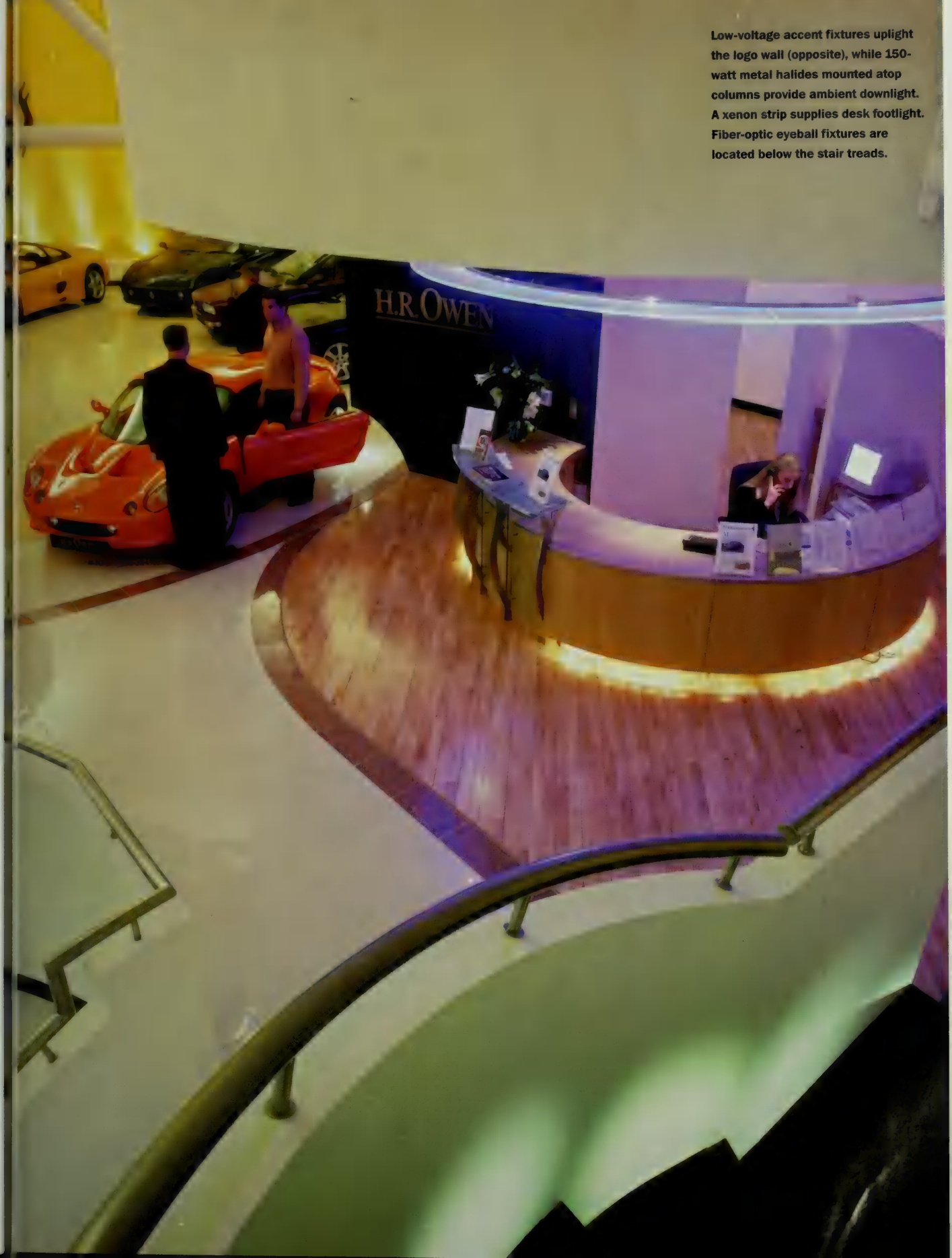
Columns inspired by Frank Lloyd Wright's Johnson Wax Administration Building feature T8 uplights.



rupted the vista across the main floor, the design team shaped them into sculptural elements that evoke Frank Lloyd Wright's classic 1939 interior of the Johnson Wax Administration Building in Racine, Wis. "Johnson Wax has long been a favorite historic interior of mine," Prince says, "and we thought similar mushroom-shaped columns would complement the soft, almost organic shapes of the Ferrari models on display."

Each column capital houses four clusters of three-directional 150-watt metal-halide lamps with a color temperature of 3000K. Serving as the principal downlighting component, the fixtures provide ambient daytime illumination to envelop the colorful cars. In addition, each column incorporates two forms of indirect lighting. A 24-volt xenon linear strip creates an accent at each column collar position, uplighting the mushroom head. A series of linear T8 fluorescent luminaires uplight the ceiling above each mushroom head, producing layered halos that emphasize the grand scale and eccentric shape of the columns.

In the evenings, the field of Ferraris moves into party mode. As the showroom closes, ambient downlights are turned off, leaving the mushroom heads ringed with light. The Ferrari logo, a prancing black horse, is silhouetted along one curved wall with low-voltage 0.5-watt lamps. Low-voltage lamps with 24-degree beam spreads are also floor-



Low-voltage accent fixtures uplight the logo wall (opposite), while 150-watt metal halides mounted atop columns provide ambient downlight. A xenon strip supplies desk footlight. Fiber-optic eyeball fixtures are located below the stair treads.



Prince designed a luminous disk to hover in the center of the office core. The custom fixture's glow is powered by 2000 LEDs.



mounted beside each window to uplight the window reveals. This layer of light frames a backdrop that lets the cars stand out like sculpture.

Three ceiling-mounted infrared-controlled programmable spotlights create a kinetic light show. "The spotlights are choreographed to conduct a ballet of light over the cars," says Prince. The luminaires graze the car bodies with streaks of light, as they fade, blink, and dance over architectural forms and signage.

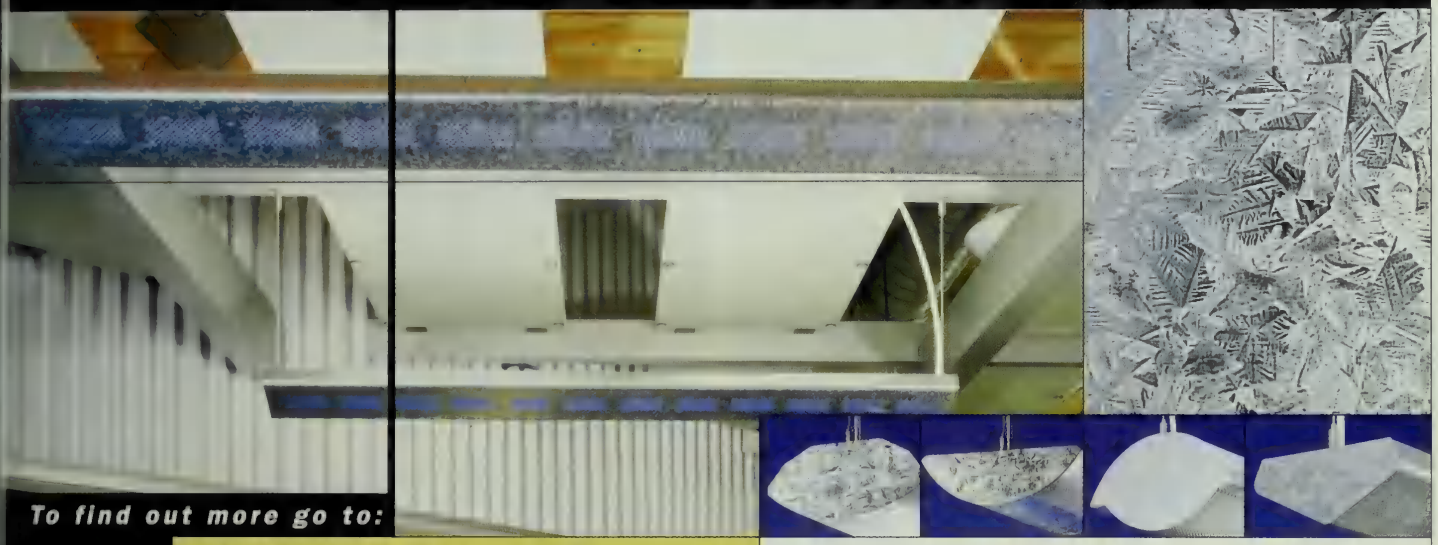
A signature lighting element hovers in the center of the space. The glowing LED light sculpture hanging over the reception desk was custom-designed by Prince, who did not expose electrical connections or obvious light source. "It simply hangs in space and radiates light," says Prince, gleefully refusing to reveal additional details about his mystery light, except that it uses 2000 LEDs. An array of recessed, ceiling-mounted MR16s provide ambient downlight for the reception area. A xenon strip concealed at the bottom of the desk completes the futuristic light composition.

The theme of soft forms and curves is carried through upstairs, with the shape of the mezzanine, spiral staircase, and furniture. Above the staircase, a circular cove glows with three bands of recessed fluorescent uplights. Office uplights are supplemented by recessed compact fluorescent downlights with mirror reflectors to diffuse the beam, so as not to detract from the glowing cove. Two light projectors using 150-watt, 3000K metal-halide lamps, each with glass cables, deliver low-level lighting to stair treads through adjustable eyeball lenses, creating the illusion of walking up through a pool of light. ■

Project: *H.R. Owen Ferrari showroom, London*
Architect: *Gooch Webster—Alex Pickford, principal architect*
Lighting designer: *Light & Design Associates—Lee Prince, IALD, partner-in-charge*

Sources
LED light sculpture: *Arc Lighting*
Adjustable downlights: *Targetti Sankey*
Edge lighting: *Intralux UK*
Signage and fiber optics: *Continental Lighting*

FINALLY GALVANIZED FIXTURES



To find out more go to:

WWW.PRULITE.COM

When your design is something special your lighting fixtures should be too. That's the driving force behind our newest offering of indirect and direct/indirect luminaires from Prudential Lighting.

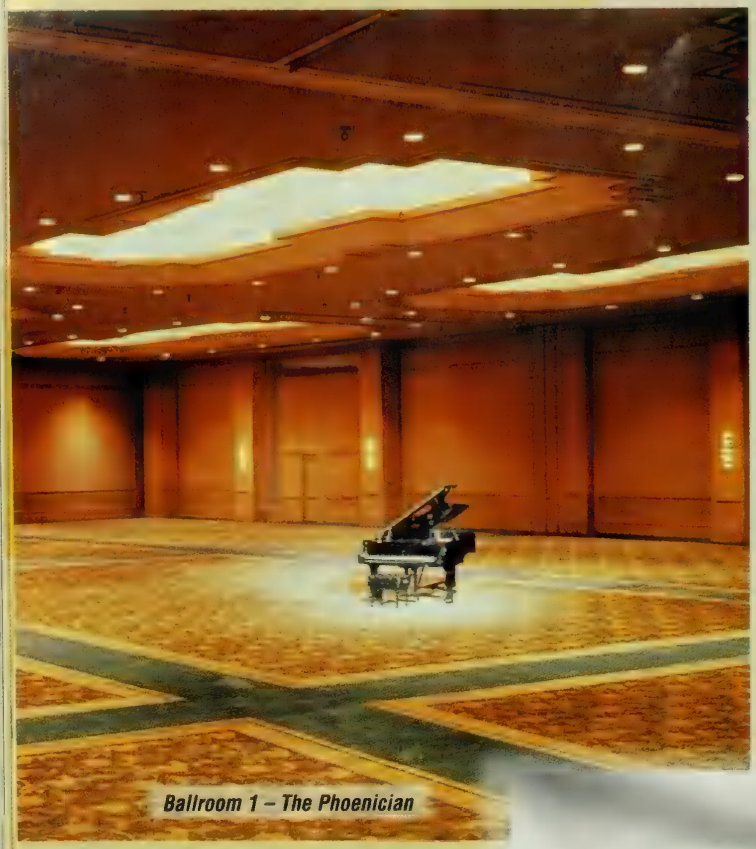
Offering finishes like large pattern galvanized steel and deep brushed stainless steel gives designers a new found freedom in lighting.

Prudential Lighting

CIRCLE 74 ON INQUIRY CARD

1737 East 22nd Street • Los Angeles, CA 90058-0408 • 213.746.0360 fax: 213.746.8838

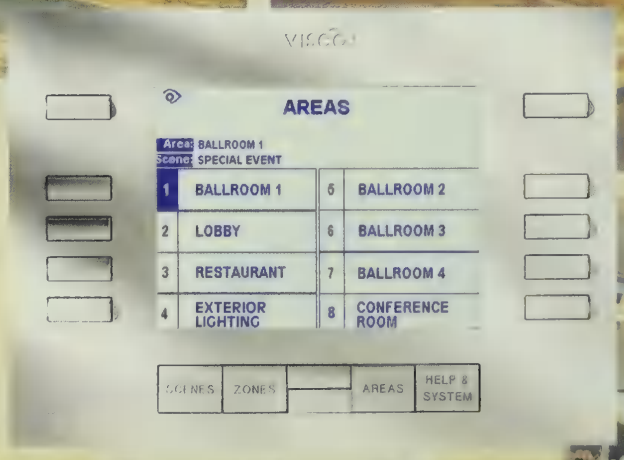
The perfect view of every room.



Ballroom 1 – The Phoenician



Lobby – The Phoenician





Restaurant – The Phoenician

One building. Many rooms. One solution – Viseo™.

The NEW Viseo LCD control enables you and your clients to monitor, operate, and modify the lighting scenes for every room in a facility – without going back to a central computer!

Viseo is designed for Lutron's GRAFIK 5000™ and GRAFIK 6000™ central lighting control systems and installs simply into the wall without any programming. Tactile navigational buttons and an easy-to-read LCD screen make operating Viseo obvious and efficient – and Viseo can be conveniently located throughout a facility for instant accessibility.

Since 1961, Lutron has enhanced the lighting control industry with innovative products and services that combine total systems solutions with world-class reliability. Viseo is the latest demonstration of Lutron's commitment to you and your clients. For more information about Viseo and Lutron's extensive line of lighting control solutions, please call toll free 1-877-2LUTRON ext. 213 or visit www.lutron.com/viseo

Photos courtesy of the Phoenician in Scottsdale, Arizona. Hotels like the Phoenician are typical examples of where Viseo can simplify the operation of a total building lighting control system.

LUTRON

Lighting Control Solutions

www.lutron.com

CIRCLE 75 ON INQUIRY CARD

Evaluating the right light for offices

DOES BETTER LIGHTING REALLY IMPROVE PRODUCTIVITY? THE VERDICT IS STILL OUT, BUT TWO NEW STUDIES HOPE TO QUANTIFY THE VALUE OF ILLUMINATION UPGRADES.

By Lindsay Audin

It seems like a logical supposition: improving the lighting in an office environment can increase worker productivity. Yet the preponderance of workplace illumination studies over the years have yielded inconclusive results; a direct relationship between lighting quality and productivity has never been adequately documented. One stumbling block has been how to quantify lighting quality. And without a standard method for evaluating the economic benefits that can be predicted from improvements in lighting quality, lighting practitioners find it difficult to justify to clients the added expense of upgraded fixtures.

Now two research programs, one sponsored by the federal government and the other by the lighting industry, are addressing the relationship between lighting and productivity. Both the Vision 2020 Lighting Roadmap and the Light Right Consortium aim to transform lighting design in many ways, not the least of which is to study it as an ergonomic, quantifiable issue, just as office chair design and indoor air quality have been examined.



Vision 2020

"Vision 2020: The Lighting Technology Roadmap" is the outgrowth of a year-long program sponsored by the U.S. Department of Energy (DOE). The project has supported industry-wide discussion of the priorities for improving lighting, examined potential barriers to achieving those goals, and mapped out strategies to overcome the roadblocks. Vision 2020 held workshops and brainstorming sessions with a wide range of lighting stakeholders, including manufacturers, designers, representatives of the DOE and U.S. Environmental Protection Agency, trade associations, end users, and utility companies.

In its vision statement, Vision 2020 identifies a variety of ways in which better lighting can be achieved. At the top of its list is to "enhance the performance and well-being of people who work under electric lighting." The Roadmap predicts that "in businesses, advanced lighting will support the relentless drive to increase productivity and value-creation, and to reduce costs."

To reach that end, the report states, significant problems must be overcome, including "the lack of a strong business case for advanced lighting that can drive end-user demand. Many case studies point to the advantages of high-quality lighting in improving productivity, employee retention, error-reduction, and workplace safety. . . . Yet these benefits have not yet been adequately documented, measured, and communicated to make a compelling case to tenants and building owners."

Lindsay Audin is the president of Energywiz, Inc., an energy and technology consulting firm (www.energywiz.com).

The project's wish list of solutions includes:

- objective definitions and metrics for lighting quality
- increased scientific knowledge of how lighting impacts human psychology, health, and productivity
- work-performance research to help make the marketing of quality lighting more effective, as has been done with ergonomic furniture.

Vision 2020 covers much more than just employee productivity. The entire text of the Roadmap report can be downloaded at: www.eren.doe.gov/buildings/vision2020.

The Light Right Consortium

Talking about better lighting is easy, but how will such lofty goals become reality? Involving many of the same people, agencies, and vendors as Vision 2020, the Light Right Consortium is a focused industry effort to establish an acceptable methodology for illustrating the impact of lighting quality on work productivity.

Carol Jones, market transformation leader at Light Right, approaches this effort with an attempt to define why such links have left many with a cynical attitude. "People are gun-shy about this work," she says. "But this is not a fishing trip; our work is aimed at research yielding positive results for the marketplace."

Light Right is based at the Battelle division of the Pacific Northwest National Laboratory, a federally sponsored think tank pursuing energy-related research and overseen by an independent research/technical advisory committee. During Light Right's 22-day kickoff workshop last January, David Wyon, Ph.D., demonstrated how he had established a link between indoor air quality and employee productivity. His "linked-mechanism methodology" was then adopted as the model that will be used to determine if a similar link exists with lighting quality.

Light Right follows a three-phase approach. In Phase 1, completed last year, Ducker Research Corporation was retained to establish that lighting customers were sufficiently concerned about employee productivity and comfort to respond when given options that could affect them. Among its findings, Ducker discovered that an average firm spends $13 per square foot per year "to maintain productivity" through such efforts as ergonomic furniture and employee accommodations. That is more than eight times the amount it spends on the energy used by lighting.

Over the next three years, Phase 2 will take on some of Vision 2020's tasks in an attempt to overcome some of the barriers it cited. In Phase 3, the consortium will use its research to develop a cost-benefit tool to help lighting practitioners demonstrate, in advance, the benefit that employers can expect by improving lighting quality in their facilities.

To develop such a tool, a consistent, accepted definition of what constitutes quality lighting must be established. Light Right plans to adopt the new "IES Lighting Design Guide," featured in Chapter 10 of the 2000 edition of the *IES Lighting Handbook*. Rather than focusing on the quantity of horizontal illumination as calculated using the venerable Room Cavity Method, the guide incorporates multiple criteria for defining quality. For example, vertical surface luminance and the use of lighting controls have been added.

Beyond workplace gains that result from merely overcoming obviously poor lighting conditions (such as insufficient task illuminance), this project will also quantify productivity improvements relative to standard designs using T8 lamps, electronic ballasts, no dimming controls, and compliance with present horizontal illuminance standards.

A LIGHTING INDUSTRY CONSORTIUM IS DEVELOPING A STANDARD METHODOLOGY TO SUPPORT WORKPLACE LIGHTING TESTS.

Light Right understands that its job is difficult; many others have failed to establish such quantitative links. Two recent studies by experienced researchers at the Lighting Research Center of Rensselaer Polytechnic Institute found no connection between employee productivity and improved lighting distribution or control. In the first study, no difference occurred among subjects working under three different luminaire arrangements having the same horizontal task illuminance. Two involved different layouts and sizes of deep-cell parabolics (with differing wall illuminances), while the third used direct-indirect fixtures. Comments by the study's peer reviewers, all veteran lighting professionals, were telling: "We must conclude—disappointing though it is—that lighting quantity and task difficulty remain more critical variables for determining task performance than lighting quality." Another participant concluded, "While I have often suspected that those outside our profession do not necessarily appreciate 'good lighting' the way lighting folks do, I had hoped that they were still being affected by it, either in mood, task performance, or something."

The second study offered subjects the option of dimming fixtures through individual controls. It concluded, "Having the lighting control system does not put the subjects in a more positive mood, nor make the subjects more alert. Rather, the level of alertness decreases over the day in all three [test] offices. . . . Being able to adjust the illuminance with the control system does not affect the performance of the visual tasks."

And what about "soft" office work in which productivity is difficult to measure? Indeed, it is hard enough to quantify the existing productivity of an artist, a researcher, or editor. How is one to then measure a change in output due to a lighting adjustment? Variables in the field are also difficult to control. Even a small change in performance must be sustained to be accepted as a basis for spending more on a lighting installation. Therefore, Light Right plans to examine improvements to productivity over many months instead of the often shorter periods involved in lab analyses. "The main thing is to shift buying behavior while maintaining scientific integrity, not necessarily to create in-depth proofs," says Jones.

Such research could also create difficulties. Suppose that, while controlling for other variables that could affect productivity, it was found that regular office parties raised productivity dramatically? Or that downsizing reduced it? Some Light Right supporters might not be so happy with such results. And what if the main impact found is only on the output or comfort of lighting designers or aficionados who notice differences in lighting quality? For observers wishing to stay up-to-date on the latest findings, Light Right expects to launch its Web site by November. ■



CIRCLE 76 ON INQUIRY CARD

Michelangelo

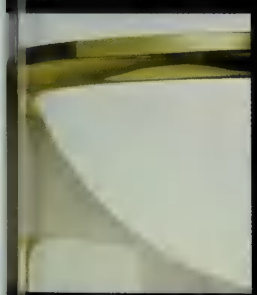
Advent

Monet

Not every work of art comes in a frame.

A palette of metal finishes to define the form. A myriad of colors to compliment any decor. With Advent, you create the masterpiece. (Frame not included).

For a complete specification grade architectural lighting catalog featuring our finishes brochure, please contact us at 262-242-1420 or spi@spilighting.com



pped traditional
al trim ring



Rolled accent ring



Cast metal back plate and arm

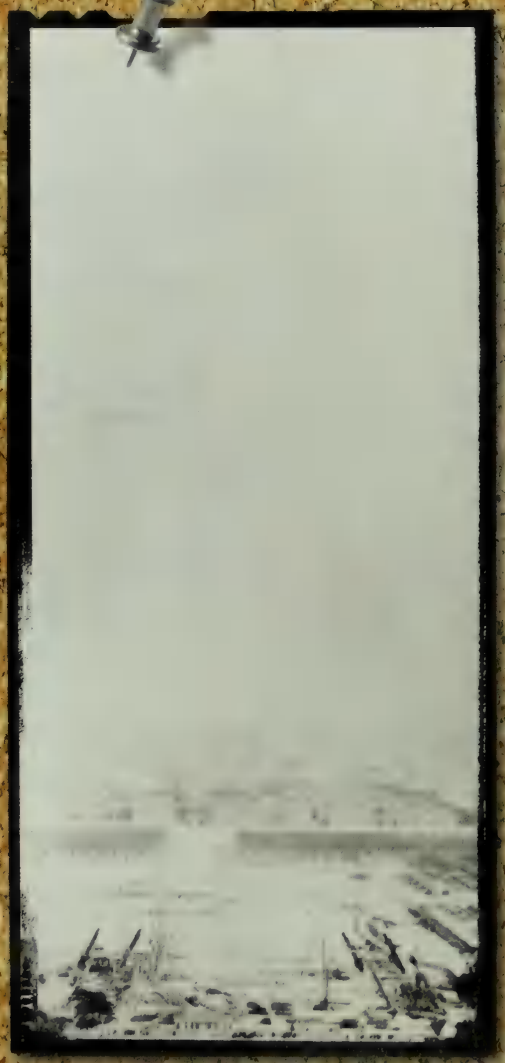
SPI Lighting Group

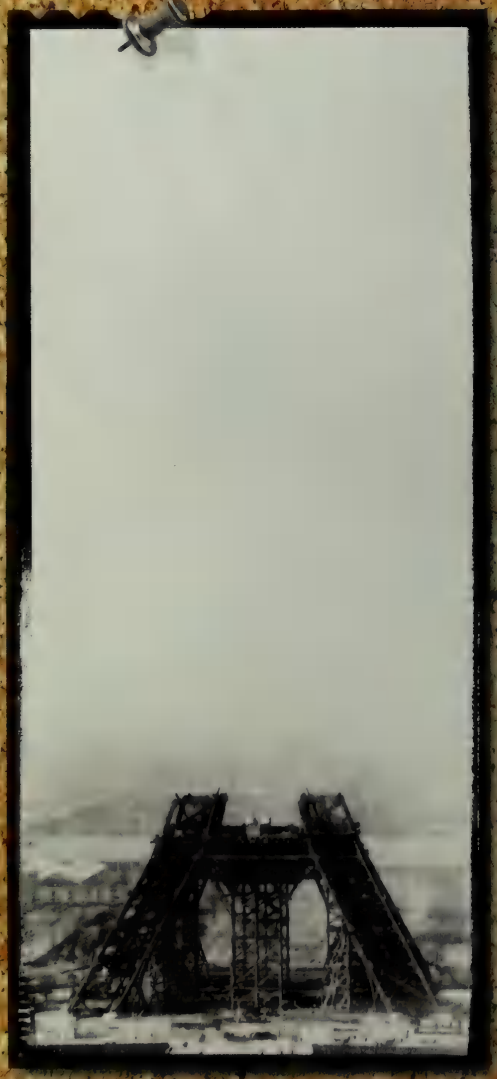
SPI
Advent

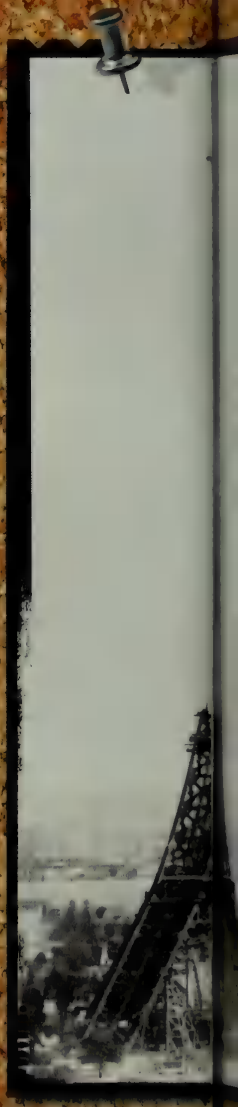
LISTED

CIRCLE 77 ON INQUIRY CARD

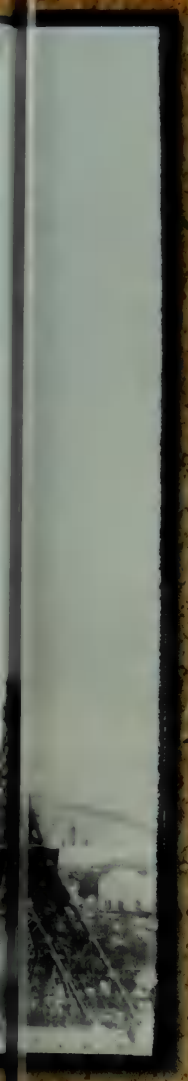
EVOLUTION OF







A MONUMENT

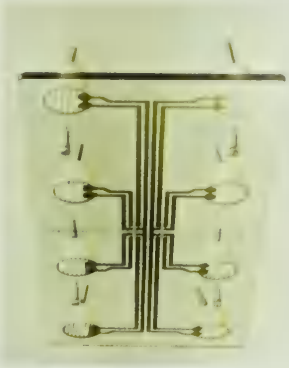






CIRCLE 78 ON INQUIRY CARD

Lighting Briefs



◄ Anything but flat lighting

The Lastra chandelier provides direct or accent lighting with individually aimed fixtures. Electrical current to each individual fixture is distributed by silk-screening flat wire with protective ceramic coating over the tempered glass configured to simulate a circuit board. Six or eight 35-watt MR11 halogen lamps with an individual aiming wand are each housed in white glass over a series of glare-reducing louvers. 800/939–3567. Flos USA Inc., Huntington Station, N.Y. **CIRCLE 200**



▲ Luck of the Irish

The authentic Celtic fixtures that hang in the main sanctuary of the newly renovated Old St. Pat's Church in Chicago were created by New Metal Crafts from a design by Booth-Hansen Architects. The 5½-foot-high lights feature a Celtic metal scrollwork and special acrylic panels with oval glass-jewel inserts in green or amber colors. Each fixture has four uplights and four downlights with special angled louvers, and 12 general lamps. Built in 1853, the church survived the Chicago fire of 1871. 800/621–3907. New Metal Crafts, Chicago. **CIRCLE 202**

► Yellow brick road

Featuring a rugged plastic housing with a strong, frosted, tempered-glass lens, the Paver, illuminated by Optiance Endglow cable, can be easily mounted within a variety of paving stone configurations, concrete pour, or wall stone applications. Lamp replacement takes place at a conveniently located remote illuminator equipped with a long-life H.I.D. lamp. 912/924–8000. Cooper Lighting, Americus, Ga. **CIRCLE 201**



▼ Leaning tower of light

The Leaning Torchère is a new fixture for soft, general lighting. It combines direct light through the internal diffuser and big perforations, and indirect light that comes out the open top of the fixture and bounces off the ceiling. No hard wiring is required for the fixture. To install, users need only fasten a small plate to the wall to support the fixture. The light can take up to a 300-watt standard lamp or a 250-watt halogen T10 lamp. Appropriate for residential, restaurant, or retail lighting, the light's cone is made of natural aluminum and comes in a standard steel-painted silver gray powdercoat. 718/625–7661. Fabulux Inc., Brooklyn, N.Y. **CIRCLE 203**



► Dramatic candelabra

Brindisi, a new catalog from Norwell Manufacturing, presents 15 contemporary models with an Italian influence. Most have imported curved opal glass that has been sanded or etched. The pendant shown here, featuring glass and a brushed nickel finish, can be used for either residential or commercial interior applications. The light is 24 inches wide by 16¾ inches high, with six 60-watt candelabra lamps. The light also comes as a nine-lamp pendant and as a single lamp sconce. 800/822–2831. Norwell Manufacturing, East Taunton, Mass. **CIRCLE 204**





◄ Memory lane

KellyArc Lighting produces custom wall sconces that hold nine backlit images placed on thin slates of glass—shown here at the Vaux Restaurant in Brooklyn, N.Y. All KellyArc lights, including table and floor lamps, use a combination of photographic images (stock or custom), which can be reproduced at any size and sandwiched in colorful stained-glass panels with aluminum or steel frames. 212/274–9010. KellyArc Company, New York City. **CIRCLE 205**

EVOLUTION ON A MONUMENT



Introducing The Ultimate Architectural Downlight

It was a gift to the world. One of the nineteenth century's greatest engineering feats. And today, 102 years after its completion, the Eiffel Tower remains a monument to Mankind's relentless drive to scale new heights. How appropriate, then, that we light—and enliven—this faithful replica using Calculite EVOLUTION, the new zenith in architectural downlighting. EVOLUTION's precision adjustable optics deliver complete aiming flexibility, while low brightness apertures minimize glare and source detection. To see this major downlighting achievement for yourself, visit EVOLUTION at www.lightolier.com or contact your local Lightolier representative.

Calculite
Evolution

LIGHTOLIER

CIRCLE 79 ON INQUIRY CARD

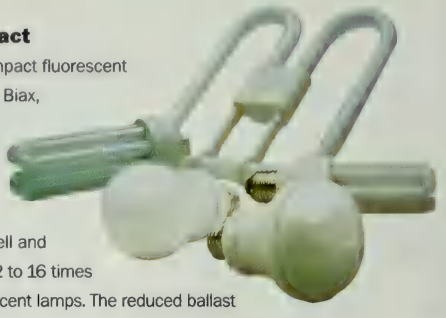
Lighting Briefs



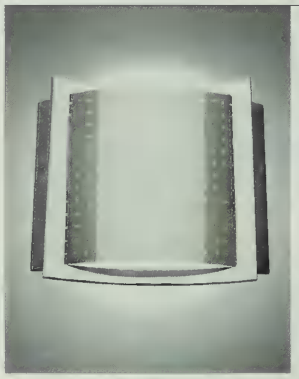
▲ Improve the outdoor environment

Paradigm outdoor-area and roadway fixtures are characterized by a large-scale, rectangular-shaped, die-cast housing with rounded edges and a raised, curved top. Optional Edgeglow windows on three sides of the curved top may be specified in clear or colored lenses that emit a soft light around the fixture. Mounting arms can be specified to accommodate single-, dual-, or quad-fixture heads. A hidden latch in the housing allows easy tool-less entry for efficient cleaning and relamping. 847/451-0040. Quality Lighting, Franklin Park, Ill. **CIRCLE 206**

► Shapely and compact



GE Lighting's new line of compact fluorescent lamps includes the Slimshell Biax, the three-way and dimmable Quad Biax, the Incandescent Shape, the Spiral, and the Post Light. At 12,000 hours, the Slimshell and Quad Biax offer a life up to 12 to 16 times as long as standard incandescent lamps. The reduced ballast diameter and GE amalgam technology mean the Slimshell and Quad Biax lamps can be used in a broad array of applications by providing higher light output over a wider range of ambient temperatures. 800/GE–LAMPS. GE Lighting, Cleveland. **CIRCLE 207**



◄ Accessorize with light

The Beltbuckle sconce features a perforated horizontal faceplate, set off against a brass backplate, creating a "belt buckle" effect. The sconce has a single four-pin, 26-watt triple-tube compact fluorescent lamp; it mounts to a standard outlet box and meets ADA requirements. The faceplate may be specified in "Angel Hair" aluminum, clear anodized aluminum, ebony satin steel, or titanium finishes. 914/698–7799. Nessen Lighting, Mamaroneck, N.Y. **CIRCLE 208**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

COMPOSITE FLOOR SYSTEMS

200%

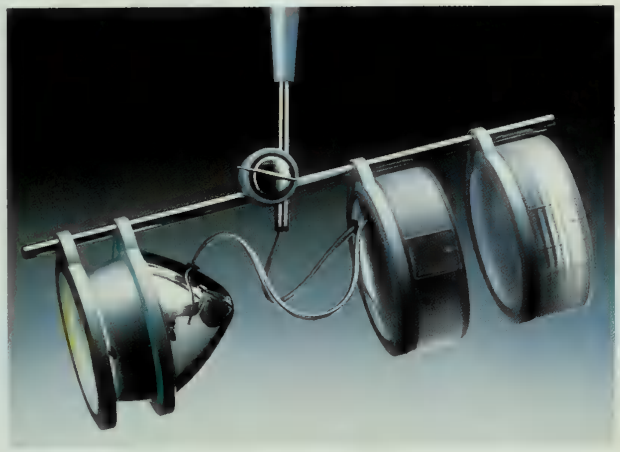
more soundproof than wood

Lighting Briefs



◄ Warm wash

The MQM70 series is a metal-halide wall washer with a computer-designed reflector and a 70-watt double-ended metal-halide lamp. Recommended for medium- to long-throw applications, the series is an ideal choice for wall washing in malls, atria, and retail spaces. With a 10,000-hour life, the light is available in warm and neutral light. 800/999-9574. Lighting Services Inc., Stony Point, N.Y. **CIRCLE 209**



▲ A head for lighting design

Created by a professional lighting designer, the Smarthead ceiling-suspended and track-lighting system employs a range of light sources encompassing line and low voltage, discharge, par lamps, and optical accessories (chromatic, protective filters, and lenses). Smarthead is particularly suited for use in retail stores, product showrooms, museums, and art galleries. The system consists of thin, adjustable mounting stems, low-profile lightheads, and add-on aluminum rings that house an array of accessories. The light comes in a choice of low-voltage halogen, PAR36, AR111, and MR16 lamp options. 714/957-6101. Targetti-Tivoli Inc., Santa Ana, Calif. **CIRCLE 211**

► This way to the egress

The universal mounting option of extreme all-conditions exit signs allows for the on-site choice of top, back, conduit, or end mounting. The signs are constructed of cast-aluminum and shielded by a UV-stable polycarbonate cover secured by tamperproof screws. 770/922-9000. Lithonia Lighting, Coyers, Ga. **CIRCLE 210**



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

3 hours of fire resistance



HAMBRO FLOOR SYSTEMS PROVIDE EXCELLENT AND HIGHLY COST-EFFECTIVE FEATURES. THESE INCLUDE FAST AND SIMPLE INSTALLATION ALONG WITH **SOUNDPROOFING SOLUTIONS** THAT MAKE HAMBRO ELEVATED SLABS AS MUCH AS 100% QUIETER THAN CONVENTIONAL CONCRETE SLABS AND 200% QUIETER THAN CONVENTIONAL WOOD FLOORS. ADD **FIREPROOFING SOLUTIONS** WHICH HAVE EARNED HAMBRO UL AND ULC RATINGS OF UP TO 3 HOURS AND YOU HAVE **BUILT-IN SOLUTIONS** TO YOUR PROJECT'S SAFETY REQUIREMENTS.

Engineered solutions

Engineered service

OUR PROVEN SYSTEMS, ENGINEERING EXPERTISE AND MANUFACTURING FACILITIES TRANSLATE INTO **VALUE-ENGINEERED SOLUTIONS** THAT ALLOW YOU TO REDUCE YOUR PROJECT'S CONSTRUCTION TIMEFRAME WHILE SAVING ON THE COST OF MATERIALS AND LABOR. FOR MORE INFORMATION, PLEASE CALL YOUR NEAREST HAMBRO OFFICE OR DIAL 1 800 546-9008 AND ASK FOR GARY COLLINS, HAMBRO MARKETING MANAGER.

hambro®
SOLUTIONS + SERVICE
CIRCLE 80 ON INQUIRY CARD

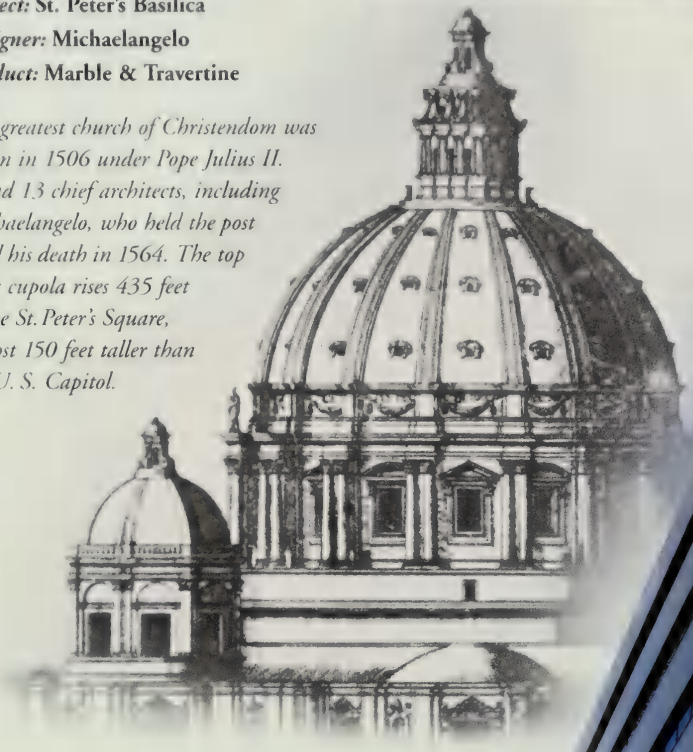
http://www.hambrosystems.com

YOU DON'T HAVE TO BE FAMOU TO CREATE A MASTERPIECE

16th CENTURY STONE

Project: **St. Peter's Basilica**
Designer: **Michaelangelo**
Product: **Marble & Travertine**

The greatest church of Christendom was begun in 1506 under Pope Julius II. It had 13 chief architects, including Michaelangelo, who held the post until his death in 1564. The top of its cupola rises 435 feet above St. Peter's Square, almost 150 feet taller than the U. S. Capitol.





21ST CENTURY STONE

Project: **Capital Commons**
Architect: **Smith, Hinchman & Gryllis Associates, Inc.**
Product: **ALPOLIC® Red Granite**

This seven-story, six-year-old building was reclad with ALPOLIC STONE SERIES,® utilizing a dry gasketed aluminum composite panel system. The entrances were clad with ALPOLIC® red granite stone series aluminum composite material that weighs only one pound per square foot.

Like Michaelangelo's creations in marble, we have taken aluminum composite materials to new heights. In fact, we're the leader in offering new and innovative products that can help you realize your visionary designs. ALPOLIC® was the first to embrace PPG/MEGAFLON,® a high-performance fluorocarbon, as our primary paint finish. We were the first to offer a virtually endless palette of colors limited only by a designer's vision. Now we've broadened our line to offer you such unique products as our ALPOLIC STONE SERIES,® our ALPOLIC A-LOOK® reflective mirror surfaces and our ALPOLIC ISD® interior products that simulate wood and stone finishes. When you have a vision for the 21st Century, create your masterpiece with ALPOLIC products.



ALPOLIC®

Helping You Create Today's Masterpieces

For more information call 1-800-422-7270
or e-mail us at www.alpolic.com

©2000 Mitsubishi Chemical America, Inc

CIRCLE 81 ON INQUIRY CARD

New Products

Solar building technologies use the nonpolluting power of the sun to help heat, cool, and power buildings. The products on the following page address the other side of the coin—how to protect our buildings (and ourselves) from the damaging effects of the sun. *Rita F. Catinella*

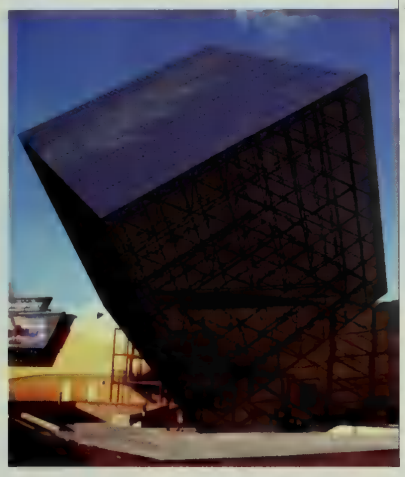
Discovery Center's cube sculpture helps to demonstrate the power of the sun

The "Solar Cube," a towering 13-story sculpture with a 20 kW PV array, attracts visitors to the Discovery Center in Santa Ana, Calif. The electricity created by it is used in the center, with excess power fed to the local utility company.

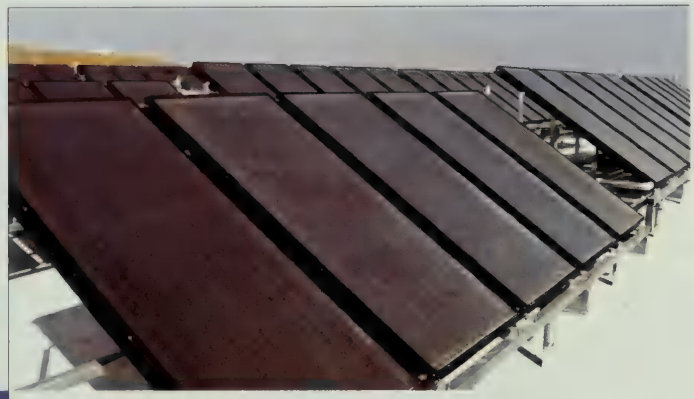
Over 500 BP Solar Millennia modules are used on the cube. These modules have advanced thin-film technology: an integrated circuit of solar cells is formed in place on the front glass by depositing silicon directly from a gas in a very thin film (.003 mm).

The fabrication of these units requires a fraction of the silicon used in conventional crystalline silicon PVs and is highly automated. The reduction in materials and labor over traditional PV manufacturing offers the promise of mainstream applications for thin-film PV on homes and buildings in the not-to-distant future.

BP Solar claims many firsts in the industry, including being the first company to make monocrystalline, polycrystalline, and thin-film technologies a commercial reality. 410/981–0240. BP Solar, Linthicum, Md. CIRCLE 212



The "Solar Cube" sculpture at the Discovery Center in Santa Ana, Calif.



Solar collectors keep buildings in hot water

Heliodyne solar-heating products have been specified for residential and commercial installations across the U.S. and abroad since the mid-1970s. Specified by private and public architects, engineers, and designers, Heliodyne systems have been installed on navy bases, national and state parks, fire stations, city halls, universities, clubs, retreats, apartments, and homes.

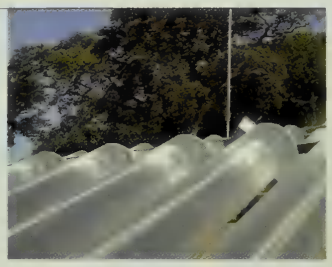
Gobi solar collectors are liquid flat-plate collectors designed to heat residential hot water, industrial process hot water, pools and spas, and to provide space conditioning in air or hydronic applications. Gobi collectors carry both U.S. and European certifications with high ratings. The products feature easy installation and integrated mounting hardware. Certified residential packages include AC- and PV-powered domestic hot water. Space-heating packages combined with domestic hot water and pools are available for radiant floor heating or forced-air heat distribution. 510/237–9614. Heliodyne Inc., Richmond, Calif. CIRCLE 213

Wind- and solar-energy hybrid power system

EcoEnergies, a sister company to Photovoltaics International, provides a range of renewable energy systems, including high-quality flat-plate modules, small wind-power systems, a commerce-sized UPS (uninterrupted power supply) system, and energy-efficient lighting and load-management products.

Using a "net metering" arrangement with Pacific Gas & Electric, the renewable-energy hybrid power system is designed to provide virtually all the annual electricity requirements of a home or commercial building. Net metering measures the difference between the electricity an owner buys from the utility and the electricity the owner produces using his or her own equipment.

In the residential application shown here, the system comprises five main components: A 7.2 kW concentrating PV array that tracks the sun from east to west each day; a wind turbine rated at 400 W in 27 mph winds that is connected in parallel with the PV panels; a 10 kWh battery bank standing by to provide up to three days' worth of energy to the critical house loads in the event of a grid outage; and a power panel that provides disconnect and overcurrent equipment for the PV system. 408/731–1229. EcoEnergies, Sunnyvale, Calif. CIRCLE 214



A renewable energy hybrid power system from EcoEnergies.

SOLAR POWER OPTIONS:

Conserval Systems Inc.
Buffalo, N.Y.
716/835–4903

Currin Corporation
Midland, Mich.
517/835–7387

Kawneer Co., Inc.
Norcross, Ga.
770/449–5555

PowerLight Corporation
Berkeley, Calif.
510/540–0550

Solar Outdoor Lighting
Palm City, Fla.
561/286–9461



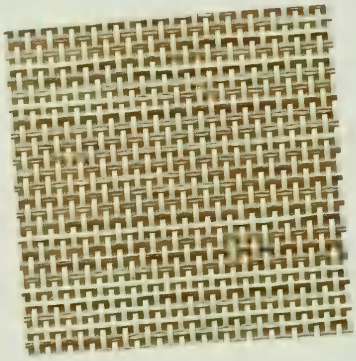
◄ Love is blinds

Solar Scrim reduces radiant heat, ultraviolet rays, and glare while allowing a clear view outside. The system is durable, fade-resistant, fire-resistant, dimensionally stable, and antistatic. Solar Scrim is available as roller shades with a clutch lift mechanism, or motorized as removable fixed screens for interior or exterior applications. 914/592–4545. Window Modes Ltd., Elmsford, N.Y. **CIRCLE 215**



◄ One film you'll never see

Vista UVShield window films reject 99.9 percent of all damaging ultraviolet rays. In addition to blocking ultraviolet rays, Vista UVShield films control other elements of solar energy, helping to reduce glare, excessive heat gain, hot spots, and wasted energy. In recognition of its protective qualities, the Vista UVShield was awarded the prestigious Seal of Recommendation by the Skin Cancer Foundation. 540/627–3000. CPFilms Inc., Martinsville, Va. **CIRCLE 216**



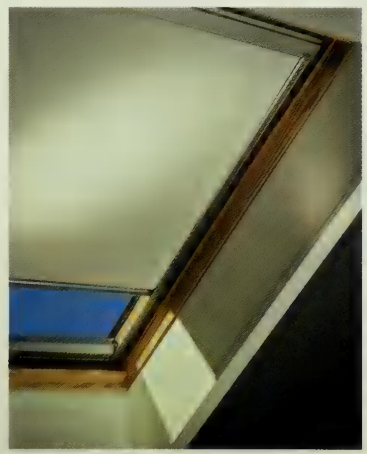
► Shady character

SunTex exterior shading fabric is made of strong vinyl-coated polyester. Developed originally for use in outdoor furniture, SunTex is mildew- and fade-resistant and is ideal for use as a shading fabric on windows, doors, and porches. The fabric is available in brown, black, gray, and stucco (shown). The darker colors provide maximum glare reduction and visibility. 800/633–5955. Phifer Wire Products Inc., Tuscaloosa, Ala. **CIRCLE 217**

► Solar control from a seated position

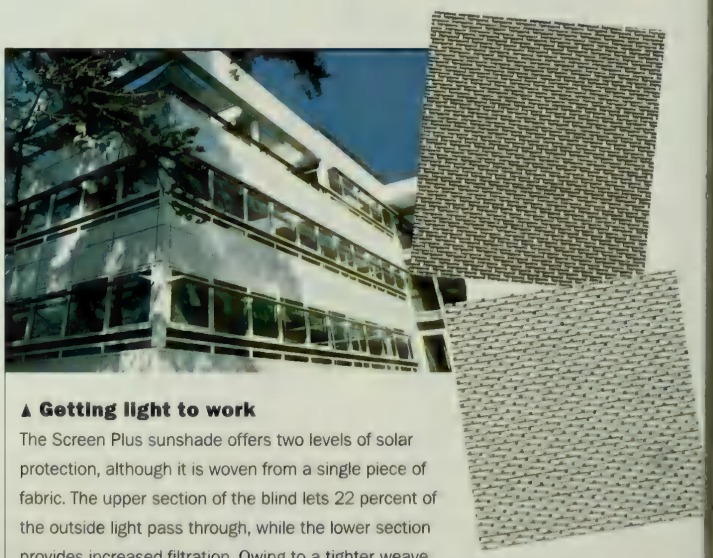
In response to the larger expanses of glass that architects and designers are incorporating into homes and offices, Lutron and VIMCO have introduced the Sivoia motorized window-shading system. The system features a quiet motor, multiple preset stop points, and wall or handheld infrared controls. Sivoia systems can be designed with a wide variety of high-style designer fabrics. 800/523–9466. Lutron Electronics Co. Inc., Coopersburg, Pa. **CIRCLE 218**





▼ For those quiet moments

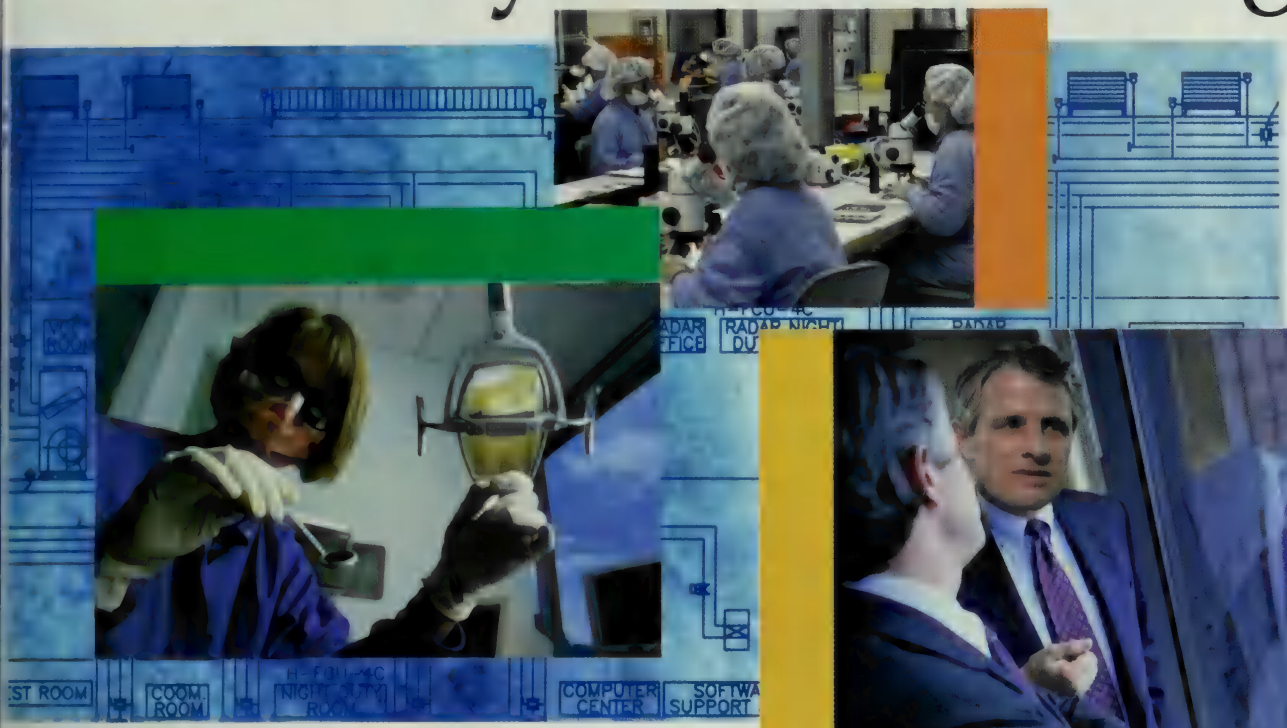
The performance of sunscreening accessories for skylights and roof windows is especially important since these products are significantly more susceptible than regular windows to direct sunlight, according to Gary Hyman, director of marketing for Velux. Recent tests conducted by Tait Solar Co., of Temple, Ariz., indicate that Velux sunscreening accessories substantially improve a skylight's ability to reduce unwanted heat gain and solar radiation when combined with the company's ComfortPlus Glazing. The electric LightBlock shade (shown) blocks out bright sunlight with the touch of a button, while the Manual Pleated Shade, which can be operated manually or electrically, features a special coating on the exterior side that acts as a heat barrier. 800/283–2831. Velux-America Inc., Greenwood, S.C. **CIRCLE 219**

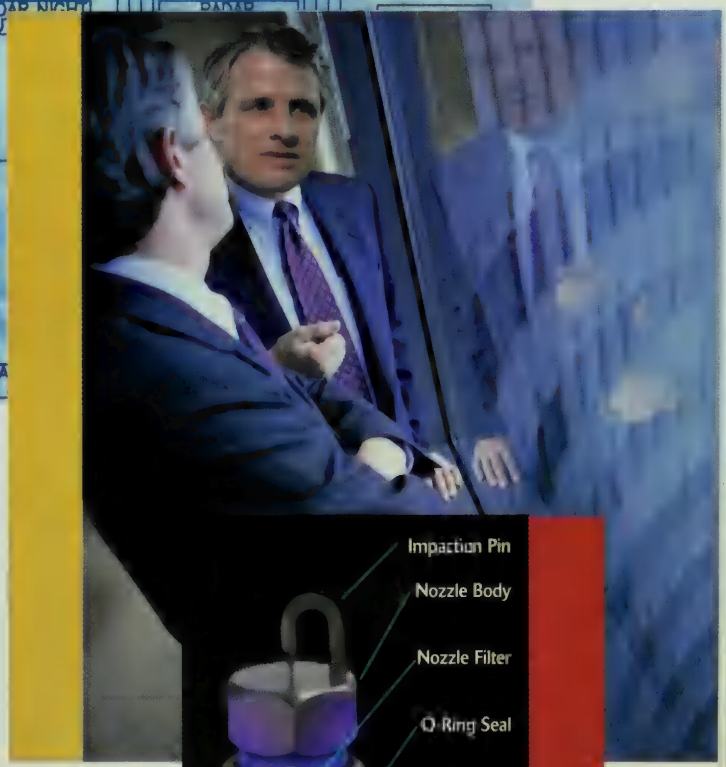


▲ Getting light to work

The Screen Plus sunshade offers two levels of solar protection, although it is woven from a single piece of fabric. The upper section of the blind lets 22 percent of the outside light pass through, while the lower section provides increased filtration. Owing to a tighter weave, only 6 percent of the outside light passes through the lower section. This dual level of solar protection provides better distribution of the light, which is concentrated in the upper part of the room. +33/0472/444000. Hexcel Fabrics, Cedex, France. **CIRCLE 220**

Save your energy. Humidify with Mee Fog.





Mee Fog high pressure humidification systems can help you meet tougher IAQ standards far more cost-effectively than other humidification methods. The concept is simple. High pressure water is forced through the special Mee Fog nozzles, which atomize the water into billions of quickly evaporating micro-fine fog droplets. No heat or compressed air is needed.

Dramatic energy savings.
By using just one horsepower to atomize 500 lbs of water, Mee Fog uses a mere 3% of the energy of compressed air systems and less than 1% of steam. Year after year, the energy savings are nothing short of extraordinary.

First-cost savings, too.
Mee keeps equipment and labor costs down, as well . . . especially in sites where 200+ lbs. of water/hr. are needed.

Proven safe and effective for new installation and AHU retrofits.
Mee Industries brings a great deal of experience to commercial building humidification. Our high pressure fog technology is mature and has been field proven in numerous applications for decades. Founded in 1969 by former Cornell University research scientist and atmospheric physicist Thomas Mee, Mee Industries wrote the book on high pressure fog humidification.



Call today for our informative White Paper

Are you talking to Mee?

626-359-4550
800-732-5364

www.meefog.com

MEE INDUSTRIES INC.

CIRCLE 82 ON INQUIRY CARD

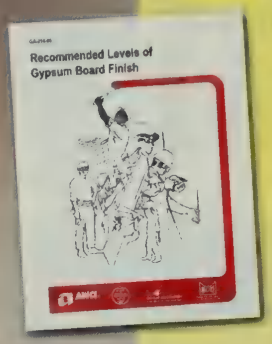
Where Do You Specify a LEVEL 5 Gypsum Board Finish?

- *Where Critical Lighting Conditions Occur*
- *Where Gloss, Semi-gloss, Enamel, or Non-textured Paints are Specified*



North Oakland Medical Centers
Emergency Room Renovation
Pontiac, Michigan

Quinn Levine Associates
Detroit, Michigan



Find out more . . .

GA-214-96, *Recommended Levels of Gypsum Board Finish,* educates architects and specifiers on the various levels of finish of gypsum board surfaces prior to the application of specific types of final decoration. This industry-wide consensus document ensures project plans can be written in specific terms so architects, contractors, and owners can best anticipate the final appearance of the decorated wall and ceiling system.

To learn more about GA-214-96, *Recommended Levels of Gypsum Board Finish,* contact the Gypsum Association or any of its member companies.

GA-214-96 is available for downloading FREE from the Gypsum Association at www.gypsum.org.

Earn **one Learning Unit hour that qualifies as an HSW hour** by studying the Levels of Finish on CD-ROM.

CONTINUING EDUCATION AIA

For details visit the Gypsum Association online.

GYPSUM ASSOCIATION MEMBERS

American Gypsum
Celotex Corporation
Continental Gypsum Company
G-P Gypsum Corporation
James Hardie Gypsum
Lafarge Gypsum
National Gypsum Company
PABCO Gypsum
A Division of Pacific Coast Building Products, Inc.
Republic Gypsum Company
Temple-Inland Forest Products Corp.
United States Gypsum Company
Westroc Inc.

GYPSUM ASSOCIATION

GYPSUM ASSOCIATION
810 First Street NE, #510
Washington, DC 20002
Phone: 202-289-5440
Fax: 202-289-3707
www.gypsum.org

CIRCLE 83 ON INQUIRY CARD

Product Briefs



▲ Conference room LCD projector

The XG-V10WU conference series projector is ideal for large conference rooms, lecture halls, and custom professional installations. The projector comes with a software application package that enables users to monitor and control the device remotely; it also offers simple network and video wall capabilities. This software allows the projector to self-diagnose, locate, and detect system errors. It can then send an error message to the control PC, informing the appropriate parties that maintenance is required. 888/GO–SHARP. Sharp Electronics Corporation, Mahwah, N.J. **CIRCLE 221**



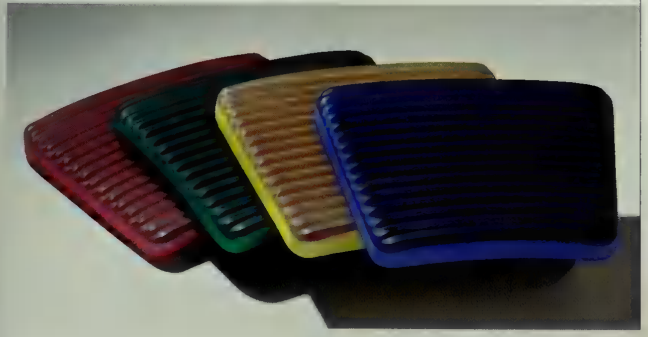
▲ Handy security

Von Duprin has added the Recognition Systems HandKey IIv to its family of electrical security products. In less than a second, HandKey IIv hand reader verifies your identification by the size and shape of your hand, eliminating the hassle of cards or keys. The product contains a complete door controller for entering and exiting and is compatible with most electrified locks, including electromagnetic locks, electric strikes, and electrified exit devices. The hand reader is designed for single opening applications and is used as a stand-alone system in applications such as computer rooms, supply rooms, executive offices, pharmacies, fitness centers, and Internet data centers. 800/999–0408. Von Duprin, Indianapolis. **CIRCLE 222**



► Healthy gel

The chairs of the new K&K collection are a collaboration between Offix Klass, Royal Medica, and TechnoGel GmbH. The padding of the collection is made of TechnoGel, a polyurethane substance developed in the medical field by Royal Medica under the license of Bayer. Technogel is manufactured without the use of adhesives, plastic coverings, or seams. It contains no plasticizers and is nontoxic. The material conforms to the body shape, achieving a high degree of weight distribution and pressure absorption. +39/0432/744944. Offix Klass S.p.A., Udine, Italy. **CIRCLE 223**





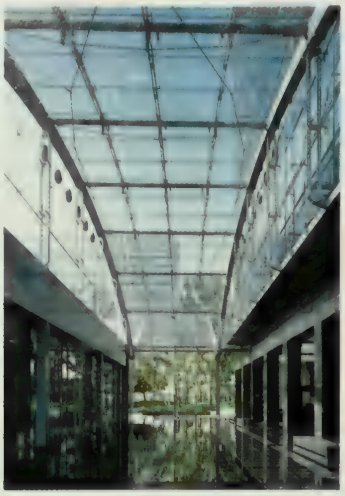
▲ Contemporary storage

One of the head-turning pieces at this year's ICFF was the Modu-licious storage system from Blu Dot. The system is offered in six different components that may stand alone or be grouped with others (stacked or placed side by side) to create a wall unit. Door and drawer fronts are painted powder-coated steel either in the six colors accompanying the maple veneer, or the four colors accompanying the newer walnut veneer. The doors may be hinged to create different cutout orientations. 612/782–1844. Blu Dot Design & Manufacturing Inc., Minneapolis. **CIRCLE 224**



▲ A welcome site furnishing

Designed by Kipp Stewart, the Arcata bench features a cantilevered arch frame that clears the ground to support and lift the square seat form. Arcata, which is appropriate for city parks, riverfronts, and corporate or university campuses, is available backless or backed (with arms), in select hardwoods or PolySite recycled plastic timbers. All metal parts are finished with Landscape Forms' proprietary Pangard II powder coating in a variety of colors. 800/521–2546. Landscape Forms, Kalamazoo, Mich. **CIRCLE 225**



◂ Glass seismic joint

W&W Glass Systems and Pilkington Glass claim to have provided the first all-glass enclosure designed to act as a seismic joint. It is located between two existing buildings at the Imperial Bank Tower, designed by Murphy/Jahn, in Costa Mesa, Calif. The glazing was point-supported by four pronged, stainless-steel, sliding spider fittings that work with a system of stainless-steel cable trusses and aluminum purlins, allowing the vault to move over six inches within a 30-foot span without breaking any of the 96 glass roof panels. 800/452–7925. W&W Glass Systems Inc., Nanuet, N.Y. **CIRCLE 226**

▾ Not happy with the color of that Olympic medal?

The Metallon metal coating process, offered in 25 combinations of metals and finishes, contains over 95 percent metal and is cold-spray-applied to surfaces such as vinyl, wood, polyurethane, and aluminum to give a particular metal look to the item. Metallon is available in seven natural metals, including brass, bronze, stainless steel, aluminum, nickel, copper, and iron rust. A standard, lacquered coating seals the metal finish. 800/223–6044. Metallon Inc., Parkersburg, W.V. **CIRCLE 227**







◂ Lazy day seating

Nxt (left), designed by Richard Frinier, is one of the new offerings from Brown Jordan in stainless steel. The seat, as viewed from the front, presents a faceted and tapered surface; when turned sideways, the seating surface disappears into a thin line. The geometry of this design is constructed of ½-inch-by-1-inch rectangular tubing horizontally and one-inch square tubing vertically. With Ocean (right), also designed by Frinier, Brown Jordon reinvents the original weatherproof ship deck recliner. Ocean, made of plantation-grown teak, has front legs accented with a distinctive S shape that widen at the foot, while its rear legs arch and flare. 562/624–4144. Brown Jordan, Long Beach, Calif. **CIRCLE 228**

▾ Custom creations with color

Cambridge wood flooring is shown here in ¾-inch-by-24-inch modules in Red Oak and Quartered White Oak Background. This slight difference in coloration enables the specifier to create a custom wood floor with just a subtle difference in color that emphasizes the pattern on the floor. 502/451–6024. Kentucky Wood Floors, Louisville. **CIRCLE 229**





▲ Go ballistic

Micarta Brass ballistic-resistant armor laminates are lighter than steel, ricochet-resistant, and claimed to be the only Class A smoke- and fire-rated projectile-resistant fiberglass building material available. Brass laminate is suitable for public buildings, postal facilities, and courtrooms. 800/845-4793. International Paper, Decorative Products Division, Hampton, S.C. **CIRCLE 230**

▾ Naturally inspired wall carpeting

Lanai, a new wall carpet from Eurotex, works in university, gallery, club, office, and retail interiors. Lanai absorbs sound and helps control operating costs by protecting walls. The 13-foot-2-inch-wide wall carpet is woven of 100 percent wool, with a warp and weft of polypropylene. The unitary back is flame-proof; Lanai is rated Class A for flame resistance. The all-natural color palette evokes the earthiness of stone and bleached grain. Colors include seagrass, pearl, corn, and sisal. 800/523-0731. Eurotex, Philadelphia. **CIRCLE 231**



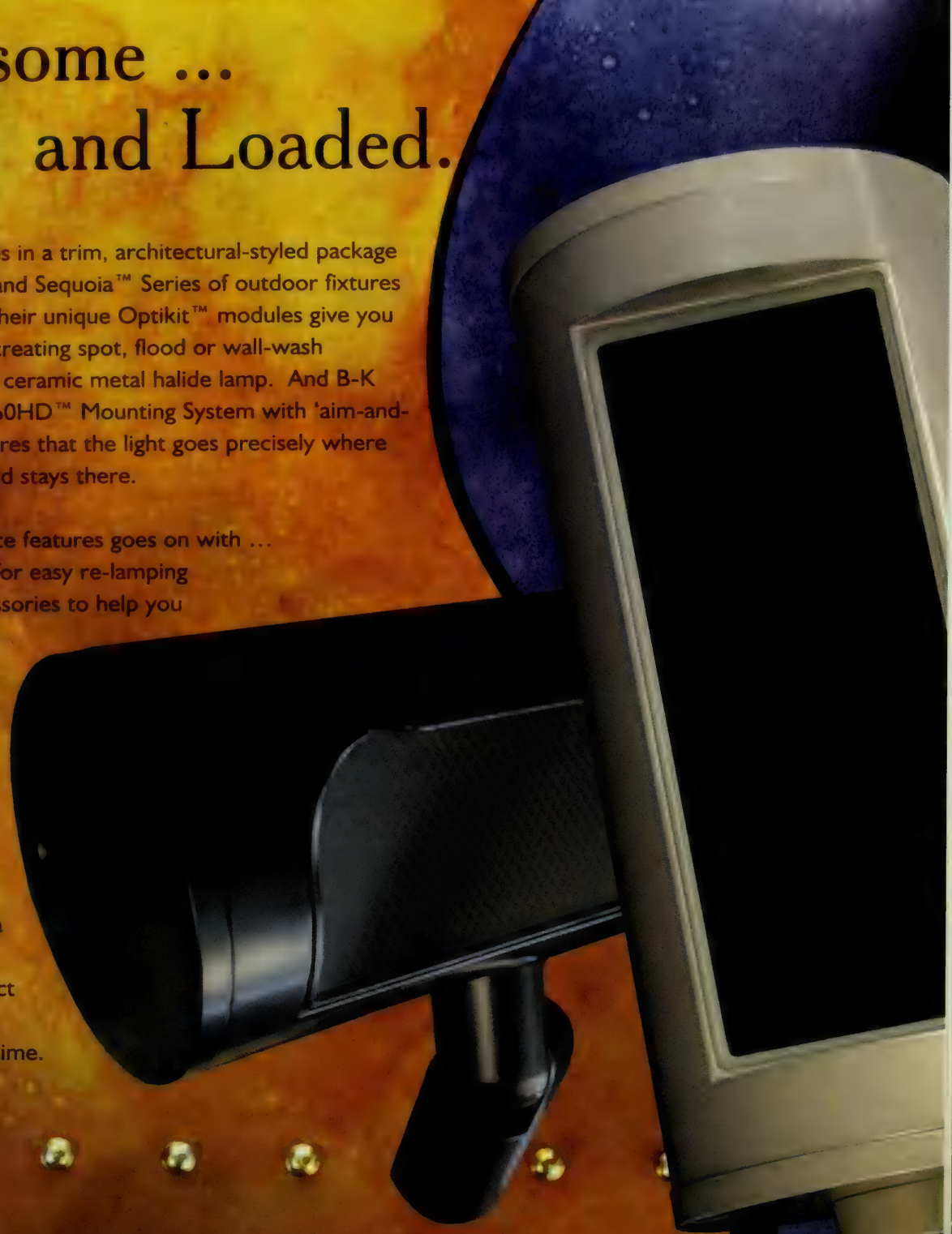
Handsome ... and Loaded.

Enjoy loads of features in a trim, architectural-styled package with the Yosemite™ and Sequoia™ Series of outdoor fixtures from B-K Lighting. Their unique Optikit™ modules give you ultimate flexibility in creating spot, flood or wall-wash patterns using the T6 ceramic metal halide lamp. And B-K Lighting's patented 360HD™ Mounting System with 'aim-and-lock' technology ensures that the light goes precisely where you want it to go - and stays there.

The list of convenience features goes on with ...

- slide-out end caps for easy re-lamping
- a full range of accessories to help you shape the beam
- B-K Lighting's exclusive ACV™ Valve System to eliminate internal condensation and corrosion.

Above all, the Yosemite and Sequoia Series deliver what you've come to expect from B-K Lighting ... Quality to Last a Lifetime.



CIRCLE 84 ON INQUIRY CARD

www.bklighting.com | 559.438.5800 559.438.5900 fax | B-K LIGHTING Quality to Last a Lifetime™

Product Briefs

▼ Closer for interior doors

The new TS 68 door closer from Dorma is adjustable to sizes 2, 3, and 4 by selecting different templating locations, making it appropriate for common interior doors up to 43 inches wide. A special template for regular mounting can enable the closer to meet barrier-free requirements. The TS 68 closer does not require a mounting backplate, and it can be finished in aluminum, dark duranodic bronze, and gold to complement an array of design needs. The hardware is listed by U.L. and C.U.L. under their reinspection programs, and upholds the standards for UL 10C and UBC 7.2 (1997) for positive pressure. 800/523–8483. Dorma Architectural Hardware, Reamstown, Pa. **CIRCLE 232**





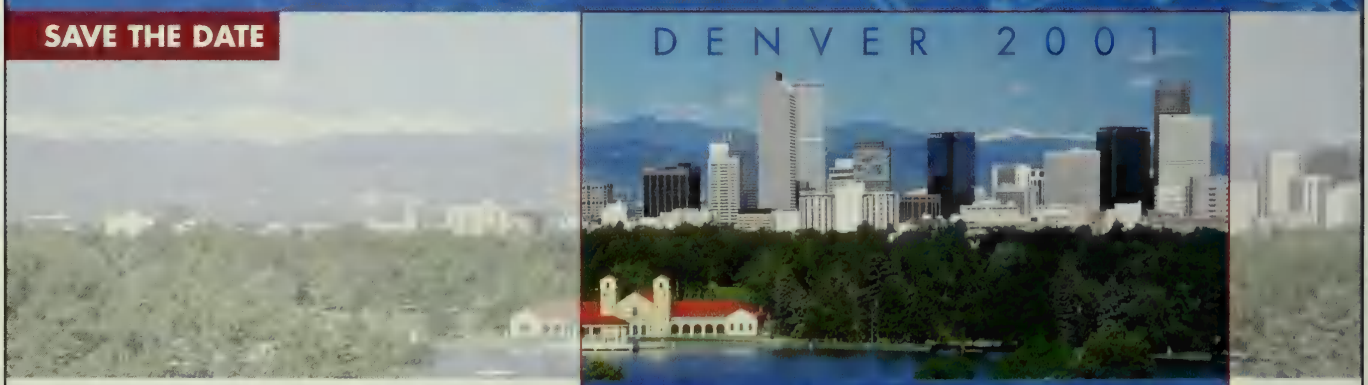
▲ Take a seat, or ten

The Friuli region of Italy produces 44 million chairs annually; 70 percent of them are exported, which explains why the region is called "The Chair Triangle." Each year, the Promosedia International Chair Exhibition is held in Udine, the heart of the Italian manufacturing area. One highlight of the show is the annual "Top Ten Awards," which highlight chairs considered to be the most innovative in terms of research and design. Winners this year were Biemme, Billiani, Calligaris, Consorzio Eurosedia, De-Ta, Eltor, Fast, Frag (for the Panarea/s chair, above right), ITF, and Manifatture del Metauro. Billiani won "Chair of the Year" for the Spinn chair (above left) designed by Luigi Billiani. Promosedia SpA, Udine, Italy. +39/0432/745611. **CIRCLE 233**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

THE AMERICAN INSTITUTE OF ARCHITECTS
2001 NATIONAL CONVENTION AND EXPO

SAVE THE DATE



LEADERS AND PARTNERS IN CREATING COMMUNITY

- Visit www.aiaconvention2001.com for complete up-to-the-minute convention information and to register online.
- Earn 18 hours/LUs in just four days to fulfill AIA membership requirements, including many that qualify for HSW and state licensure.
- Access to over 600 leading-edge companies showcasing products and services for the design and construction industry all under one roof!
- Explore Denver, the Mile-High City, with its unique mountain location and award winning architecture.

CONVENTION
AIA
EXPO 2001 DENVER

May 17-19, 2001
Colorado Convention Center

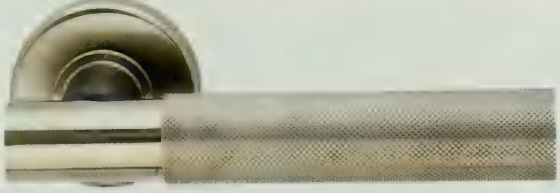
For more information contact
AIA Convention Hotline: 202-626-7395
Fax: 617-859-4354
Email: aiaexpo@hhcc.com

Product Briefs



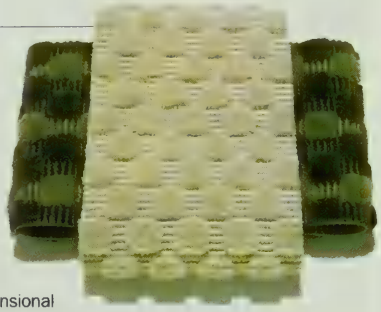
▲ No room for dust bunnies

The Vanja bed, designed by Vico Magistretti, now comes with a container base that gives hidden space for linens, off-season clothes, or other items. The space-saving bed was influenced by Shaker styling and features broad curves—both convex and concave—that interact to form the sculptural headboard. Instead of four legs, the platform base creates a clean, solid look. Additional bedroom furniture, including side tables, chests, benches, chairs, and love seats, are also available at Dormire. 310/393–9288. Dormire, Santa Monica, Calif. **CIRCLE 234**



▲ Why K2?

The K2 line of door handles, designed by Antonio Citterio, features cylindrical handles available in polished and satin stainless-steel finishes. A series of interlaced cuts called "knurling" gives the handles a distinctive texture. Citterio's design is the newest addition to Valli & Valli's growing collection of products by distinguished architects and designers, including Sir Norman Foster, Renzo Piano, Aldo Rossi, Michael Graves, and Robert A.M. Stern. 212/326–8811. Valli & Valli (U.S.A.), New York City. **CIRCLE 235**



► Carpet genus

Case Study No. 2652 sounds more like an entry in a scientific journal than a carpet from Tuva Looms. Designed by Suzanne Tick and Terry Mowers, the new carpet is woven using natural jute backing yarns and DuPont Antron Legacy nylon on a velvet loom, resulting in a deeply dimensional surface with an organic and rounded pattern. It is available in a 12-foot broadloom and comes in four colorways. For contract sales, Tuva Looms is distributed by Interface Americas. 212/598–1021. Tuva Looms, New York City. **CIRCLE 236**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info





CIRCLE 85 ON INQUIRY CARD



Modern Masters of Architectural Timbers

The G.R. Plume Company sets the standard for integrating the beauty of natural wood into today's architecture. Our masterful architectural timbers grace distinctive homes and businesses around the world. We provide beautiful and ingenious solutions, insightful collaborations, and a thorough understanding of wood and its applications. Our twenty years of creative and technical woodworking expertise can help you realize your architectural vision. For more information,

call (360) 384-2800.



THE G.R. PLUME COMPANY
ARCHITECTURAL TIMBER DIVISION

CIRCLE 86 ON INQUIRY CARD

Product Literature

Commercial capabilities

Marvin's new CD features a short movie that highlights the company's background with commercial case studies. 888/537-8266. Marvin Windows and Doors, Warroad, Minn. **CIRCLE 237**

Hardware resource

Hettich International's new resource book is a reference guide for cabinetmakers, architects, and fittings distributors. All of Hettich's 2,500-plus products are included with illustrations and detailed explanations. 770/887-3733. Hettich America L.P., Alpharetta, Ga. **CIRCLE 238**

Flooring specification aid

Tarkett's new CD gives users immediate access to selected product lines and offers them a number of ways to view each line and to create custom designs within a line or among the lines. 800/225-6500. Tarkett Inc., Whitehall, Pa. **CIRCLE 239**

Corporate environments

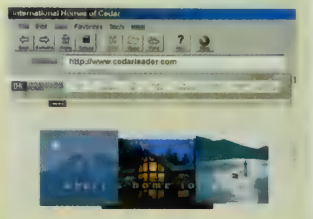
USG's new brochure gives architects, designers, and building owners detailed information about specific products designed for their corporate needs. It focuses on administrative offices, atrium entry lobbies, conference areas, corridors, executive areas, open-plan offices, private offices, and rest rooms/utility areas. 800/950-3839. USG Corporation, Chicago. **CIRCLE 240**

Downlighting guide

Hubbell's new guide provides an in-depth look at all the company's architectural, commercial, and residential downlights. 800/270-3737. Hubbell Lighting Inc., Christiansburg, Va. **CIRCLE 241**

NEW SITES FOR CYBERSURFING

Site for custom timber homes
www.cedarleader.com



E-hub for facility managers and service providers **www.myFacilities.com**

Rolling doors and grilles
www.cornelliron.com

Design site covering everything from architects to home appliances
www.designboom.com

Glass system **www.wwglass.com**









For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

Product Literature

ndustrial lighting systems

new brochure from Holophane escribes the company's line of industrial uorescent lighting systems. The piece ocuses on solutions for specific applica- ons, including illumination for high- and w-bay manufacturing areas and lighting r warehouses. 740/349-4144. olophane, Newark, Ohio. **CIRCLE 242**

Vashroom equipment CD

obrick's interactive washroom-accessory nd toilet-partition product data CD fea- ures a product finder, CAD drawings, roduct specs, tech data sheets, and a arrier-free planning guide. 800/553- 600. Bobrick Washroom Equipment, orth Hollywood, Calif. **IRCLE 243**

echnical guides for gypsum

he Gypsum Association introduces pdated editions of two of its technical ublications: the *Fire Resistance Design Manual* and *Application and Finishing of Gypsum Board*. The first includes fire esistance ratings for over 300 gypsum-rotected systems; the second describes he most up-to-date industry recommen- ations for the proper installation and nishing of gypsum board. 202/289-5440. Gypsum Association, Washington, D.C. **CIRCLE 244**

Door/frame systems binder

Chicago Metallic's new architectural binder provides specific product information, three-part format specification, and detailed frame drawings for the nine-piece roll-formed frames. Drawings showing centerline locations for CMC standard hinge and strike locations are also included. 800/323-7164. Chicago Metallic, Chicago. **CIRCLE 245**

Timely door frame CD

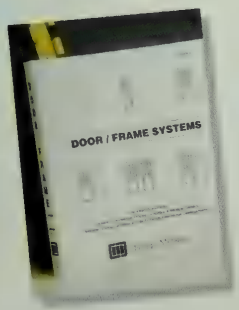
A new interactive CD the size of a business card is available from Timely. The nine-minute presentation on the CD focuses on the application of Timely's prefinished steel door frames. 800/247-6242, Timely, Hollywood, Calif. **CIRCLE 246**

Software imaging technology

BoralVision 2000 is an updated version of Boral Brick's computer-imaging system for builders and architects. BoralVision allows potential homeowners to view a variety of brick on their homes before construction begins, thus expediting the selection and sale process. 800/5-BORAL-5. Boral Bricks Inc., Roswell, Ga. **CIRCLE 247**









For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



"More and more, our projects require an all-electronic information flow.

That's why more and more projects begin at sweets.com."


DIRECTORY


CATALOG FILES


CD


SWEETS.COM


PRODUCT NEWS

Search. Compare. View. Select. Import. This is way too easy.

Sweet's CAD Library

The latest improvement to sweets.com, the new Sweet's integrated CAD Library, saves time in research, comparison, selection, specification and creation of construction documents. Sweet's exclusive navigation guides you through your search and bridges the gap between product groupings and the details available for a particular product model. Better than a standard "keyword" search, Sweet's search and selection criteria result in a more refined set of CAD Library drawings. Spend less time wading through pages of irrelevant search results, and more time getting your work done.

Detailed. Standardized. Flexible.

Formatted and layered by Sweet's to be easily searchable, viewable and directly usable, each CAD Library detail incorporates Sweet's Smart Layer Mapping capability. Smart layers allow easy, automated conversion from the pre-defined Sweet's layer names to your own in-house layering standard for the entire group of CAD Library details used in your project. We didn't call it "Smart" for nothing.

Making the Marketplace Work for You, **Now!**

Any format. Any time. Sweet's is bringing manufacturers and users together in a dynamic flowing marketplace. Go to sweets.com today and discover the latest ways that Sweet's can help you do your job easier, faster and more profitably than ever before.


Sweet's Group
McGraw-Hill Construction Information Group

A Division of The McGraw-Hill Companies



Sweet's
Construction's Product Marketplace℠

The Most Manufacturers.
The Most Buyers.
The Most Opportunity.

CIRCLE 88 ON INQUIRY CARD

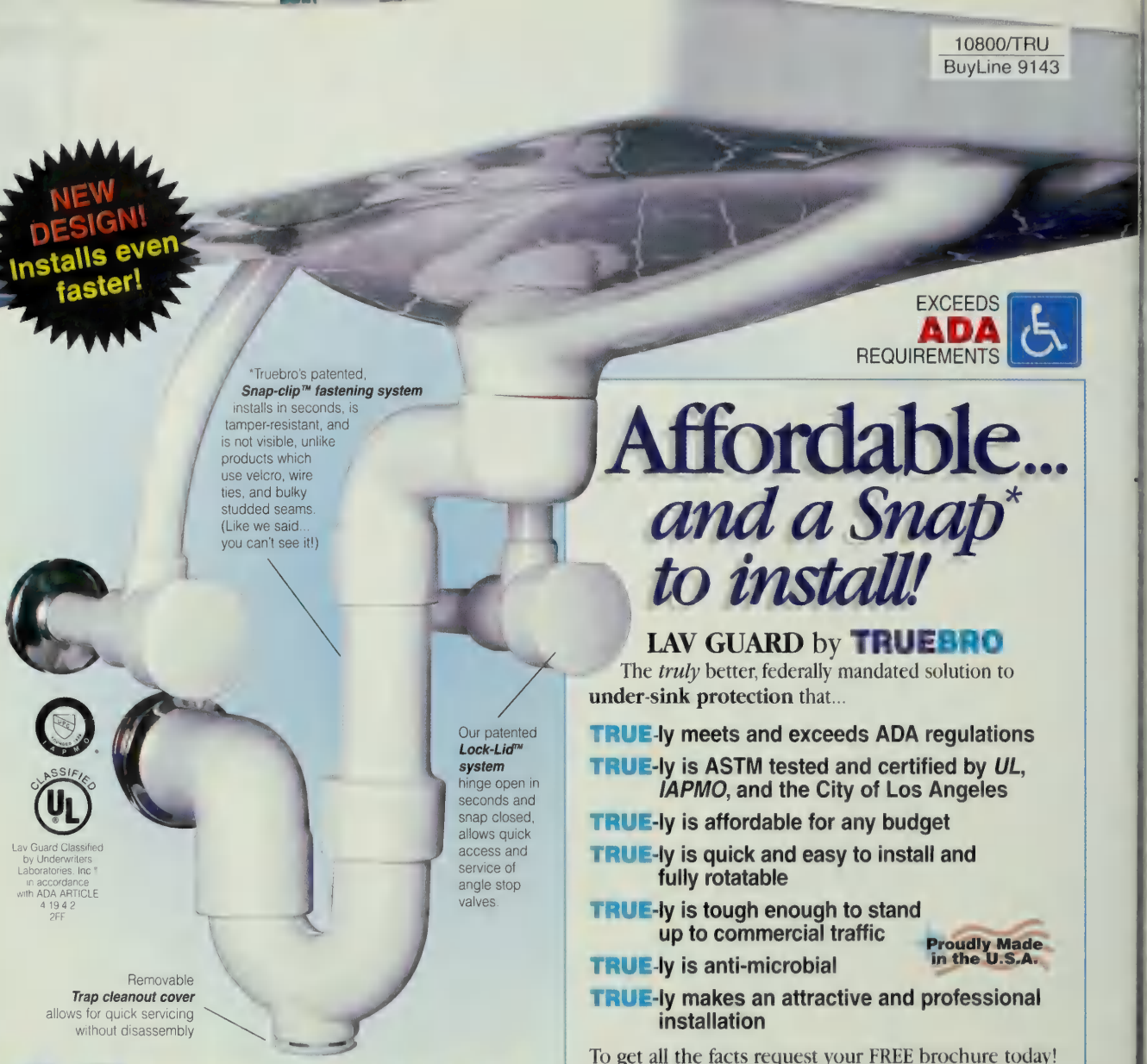
sweets.com is part of the **construction.com** network

5AR10

10800/TRU
BuyLine 9143

NEW DESIGN! Installs even faster!

EXCEEDS ADA REQUIREMENTS



Affordable... *and a Snap* to install!*

LAV GUARD by TRUEBRO

The *truly* better, federally mandated solution to **under-sink protection** that...

- **TRUE**-ly meets and exceeds ADA regulations
- **TRUE**-ly is ASTM tested and certified by *UL*, *IAPMO*, and the City of Los Angeles
- **TRUE**-ly is affordable for any budget
- **TRUE**-ly is quick and easy to install and fully rotatable
- **TRUE**-ly is tough enough to stand up to commercial traffic
- **TRUE**-ly is anti-microbial
- **TRUE**-ly makes an attractive and professional installation

Proudly Made in the U.S.A.

To get all the facts request your FREE brochure today! There's no obligation... and you'll quickly see why TRUEBRO is *truly better!*

LAV GUARD™
UNDERSINK PROTECTIVE PIPE COVERS

Also available...



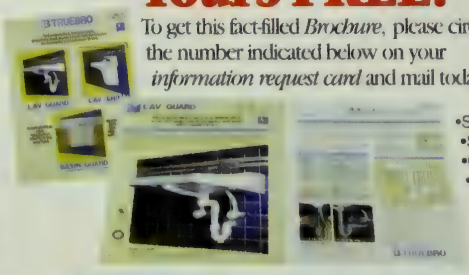
LAV SHIELD
LAVATORY PROTECTIVE ENCLOSURES



BASIN GUARD™
UNDERSINK PROTECTIVE ENCLOSURES

Yours FREE!

To get this fact-filled *Brochure*, please circle the number indicated below on your *information request card* and mail today!



- •Specs!
- •Sizes!
- •Colors!
- •Styles!

TRUEBRO
MAKING AMERICA ACCESSIBLE

7 Main Street • P.O. Box 440 • Ellington, CT 06029
Tel 800-340-5969 • www.truebro.com

CIRCLE 89 ON INQUIRY CARD

Dates & Events

Calendar

Wood: An American Tradition
Washington, D.C.
September 9, 2000–April 22, 2001
The National Building Museum is hosting an exhibition exploring the important and varied role of wood in American architecture. For information contact 202-272-2448 or see www.nbm.org.

Architect of Form and Spirit: Eric Mendelsohn in Saint Louis
St. Louis
September 17, 2000–March 10, 2001
A major exhibit highlighting the life and work of German architect Eric Mendelsohn, designer of COCA's current home, where the exhibit will be. Call 314/725-6555; or get more information on the Web at www.cocastl. org.

Edoardo Gellner and Carlo Scarpa: The Church of Core de Cadore
Venice
October 5–December 22
This exhibition explores the history and relevance of the church and the village where it is located. Call 041/710025-2571012, write archivioprogetti@iuav.it, or see http://oberon.iuav.it.

Light, Life, Libeskind: A Look at the New Jewish Museum
San Francisco
October 26, 2000–January 28, 2001
The Jewish Museum of San Francisco is presenting a exhibition of Libeskind's drawings, computer renderings, and models of its new facility. For information call 415/591–8800; or write info@jmsf.org.

Monuments, Mills and Missile Sites
Washington, D.C.
October 26, 2000–April 29, 2001
This exhibit explores 30 years of the Historical American Engineering Record (HAER), which documents historically significant engineering and industrial works throughout the United States. At the National Building Museum, call 202/2782–2448 or go to www.nbm.org

Riba Architecture Gallery
London
November 2000
A series of presentations: November 7 Julius Shulman speaks about Richard Neutra and Modernism in Calif.; November 14 Jon Rouse examines architecture from the perspective of the corporate investor; November 18 features a one-day symposium on many of the architectural issues shaping contemporary practice today; and on November 28, Paul Morris, of the American Landscape Institute, speaks on quality of life and smart growth. Call 020-7307-3662 or contact hilary.clarke@inst.riba.org

UCLA's Department of Architecture and Urban Design
Los Angeles
November 2000
Two architects speak on their body of work and philosophy of design: Bernard Tschumi, November 23; Rafael Moneo, November 27. Contact Carolyn at 310/825–6540 or write ccampbel@arts.ucla.edu.

Art Is Work: A Milton Glaser Retrospective
New York City
November 2–December 8
The largest retrospective ever held in New York on the work of this well-known American graphic designer. AIGA's Fifth Avenue gallery. 212/807–1990, www.aiga.org.

Computers for Construction 2000 and AEC Systems
Anaheim, Calif.
November 6–9
The only trade show and conference dedicated exclusively to computer use by contractors. At this regional computer and high-tech event, the design and construction industries join forces. Anaheim Convention Center. 610/458–5472.

8th Annual CANstruction: Designers Build Big to End Hunger
New York City
November 9–20
The winning teams' work will be on display at the New York Design Center. The public is asked to donate a can of food as the price of admission. 212/792–4666.

Jewels in the Crown: The Architecture of the Savannah Plan
Washington, D.C.
November 10, 2000–January 5, 2001
Savannah, Ga., is acclaimed as one of America's most vibrant small cities. This exhibit illustrates the architectural and cultural approach taken in creating this successful urban experience. At the Octagon, call 202/626–7387.

Architectural Competitions in America
New York City
November 10, 2000–January 6, 2001
This traveling exhibition at two New York galleries reviews the legacy and utility of competitions as important historical phenomena resulting in some of the most significant built works. For information contact Jessica Lavin, 718/636–3517; jlavin@kmwarch.com.

Flight Patterns
Los Angeles
November 12, 2000–February 11, 2001
This exhibit explores the landscape, urbanism, and relationship of cities to land in geographic areas of the Pacific Rim. At the Geffen Contemporary at MOCA, contact 213/626–6222 or go to moca.org.

Downsview Park Design Competition Exhibit/Critique
New York City
November 13–December 21
On display are models and drawings by finalists of this 320-acre park in Toronto; a forum of leading critics and commentators rounds out the program. Critique November 14 at MOMA and exhibit at Van Alen Institute. Contact 212/924–7000; www. vanalen.org.

16th Annual Build Boston
Boston
November 14–16
Premier convention and trade show featuring more than 350 leading suppliers of building products and services and over 200 workshops and networking events. Contact 800/544–1898; or see www.buildboston.com.

Dreams and Disillusion: Karel Teige and the Czech Avant-Garde
Miami Beach, Fla.
November 15, 2000–April 1, 2001
The Wolfsonian-Florida International University presents the first U.S. exhibition on Karel Teige, the graphic designer, architectural theorist, and important proponent of the European avant-garde. For information call 305/531–1001.

Dates & Events

Cities in Motion
Montreal
November 15, 2000–April 1, 2001
Three exhibitions united around the theme illustrate how modern transportation systems have changed the fabric and scale of cities over the past century. At the Canadian Centre for Architecture, 514/939– 7000; icloutier@cca.qc.ca.

Good Design Is Good Business: Design Strategies for the New Economy
Washington, D.C.
November 17
A Business Week/Architectural Record (McGraw-Hill Companies) conference in association with the National Building Museum and the AIA. This half-day conference brings together key business leaders and architects to discuss collaboration between architects and clients resulting in the achievement of business goals. At the National Building Museum. To register, go to www.architecturalrecord.com.

Presenting The Dimming System You Always Wanted

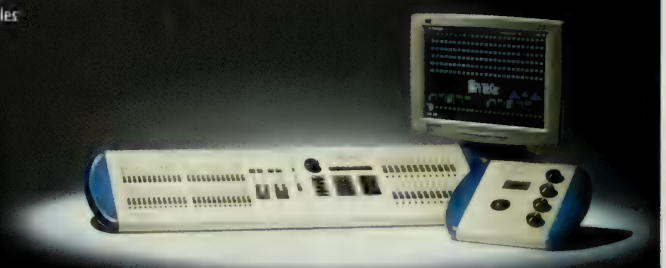
512 channels of stage lighting control all the time, in every configuration

Operate with the push of a GO button

Multiple Two Scene/Single Scene configuration available for simultaneous hands-on operation

Add Control Freak™ module for precise control of intelligent devices

- Address up to 1024 DMX slots
- Two sets of Crossfaders for simultaneous cue sequencing/stacks
- Two sets of GO & STOP/REVERSE buttons for automated ease
- 2,500 user programmable macros
- 50 effects with 100 steps each operable via SubMaster Handles
- 288 SubMasters
- 1,000 Cue capacity
- Driver card & output for SVGA color monitor
- 3.5" floppy disk drive
- Printer port
- Midi
- Alphanumeric labeling via plug-in computer keyboard
- Options include:
 Offline Editor
 Remote Video
 Handheld Remote
 Designers Remote
 Midi Show Control
 Moving Lights Outrigger
 Ethernet IEEE 802.3



Bijou™ memory console with Control Freak™ console

Electronics Diversified, Inc.
Lighting the way since 1967
800.547.2690 Fax 503.629.9877 www.edionline.com

CIRCLE 90 ON INQUIRY CARD

On the Job: Design and the American Office
Washington, D.C.
November 18–June 24, 2001
This major exhibition documents the American office as an architectural and social space, a dynamic environment whose significance extends beyond physical boundaries. National Building Museum. Registration required, call 202/272–2448 or see www.nbm.org.

Neocon West Convention
Los Angeles
November 29–30
One of the West Coast's biggest events for interior designers and the facilities-management community. Contact 312/527–7074 or write jmannino@mmart.com.

AIA Students Forum 2000 Conference
Los Angeles
December 27, 2000–January 2, 2001
The AIA's annual conference provides students with the opportunity to learn about issues concerning architectural education and the profession. An impressive list of speakers, lectures, tours, and seminars. For information, visit www.aiasforum2000.com or contact Ann Marie Teheny at amtaheny@ aol.com.

National Trust Study Tours
The year 2001
Led by esteemed study leaders, local guides, and guest lecturers, this series of 85 tours under the auspices of the National Trust provides something for everyone. To receive a free copy of the 68-page guide contact 800/944–6847 or tours@nthp.org.

Competitions

Rudy Bruner Award for Urban Excellence
Deadline for entries: December 4
This award honors urban projects that demonstrate collaborative processes and meaningful values in good design. Cash prizes are awarded. 617/492–8401, ext. 184. www.brunerfoundation.org.

The 11th Annual James Beard Foundation Awards
Deadline for restaurant and graphic design entries: January 31, 2001
The award honors culinary-related talent, including restaurant designers of projects in the United States and Canada. Entry forms and rules can be obtained by faxing or E-mailing requests to 212/627–1064/jbfmoller@pipeline.com or 212/645–3654/dpadmore@myoungcom.com. Forms can be downloaded from jamesbeard.org.

Dates & Events

An International Competition regarding Architecture and Water
Deadline for registration: November 30; for entries: March 31, 2001
Sponsored by the International Union of Architects (UIA), and in response to UNESCO's campaign to illustrate the importance of water in the 21st century, this competition calls for ideas that will show that water in all its forms can stimulate architects. For information and registration, call 33-1-45-24-36-88; write uia@uia-architectes.org; or go to uia-architectes.org.

NEA's Grants for New Public Works
Deadline for letters of interest: January 11, 2001
As part of an effort to invest in projects that promote livable communities, the NEA will fund a limited number of design competitions to stimulate excellence in design in the public realm. Though NEA is especially interested in landscape design, competitions include architecture, planning, graphics, and industrial design. Call 202/682–5452 or go to www.arts.gov.

National Building Museum 2001 Apgar Award for Excellence
Deadline for nominations: November 22, 2000
The Apgar award recognizes superior contributions by individuals who observe, interpret, and evaluate America's built environment. For information call 202/272–2448 or see www.nbm.org.

Competition for Seaside Landmark
Deadline for entries: January 23, 2001
The Town of Seaside and the Seaside Institute are sponsoring a competition to design a landmark to greet visitors and commemorate the 20th anniversary of the community's founding. This idea-based competition is open to architects who have designed buildings at Seaside in the past, talented young architects, students of architecture, and even homeowners and children. For entry forms call 850/231–2226, or see www.seasidefl.com.

Competition for Community Centers of the Future
Deadline: December 13
The Danish Foundation for Culture and Sports Facilities invites entries for the design of community centers. The winner will be awarded a cash prize and the design of three community centers in Denmark. For information call +45-32-83-69-01, write konkurrencer@dal-aa.dk, or download information from the Web at www.dal-aa.dk.

The 2001 Gabriel Prize
Request for information: due December 1
Sponsored by the Western European Architecture Foundation, this competition awards design executed in France with the advice and under the supervision of a representative of the foundation. A stipend is provided to cover the cost of travel to France. Submit a request for information to: The Western European Architectural Foundation, c/o The Boston Society of Architects, 52 Broad Street, Boston, Mass. 02109-4301.

The Rotch Traveling Scholarship
Application due: January 1, 2001
This prestigious scholarship, awarded to the winner of a two-stage design competition, covers eight months of travel throughout the world. Requests for applications must be submitted in writing to: Rotch Travelling Scholarship, 52 Broad Street, Boston, Mass. 02109.

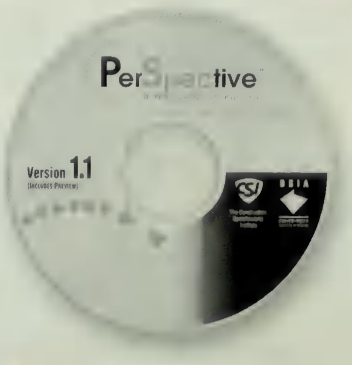
Don't reinvent the wheel...

...we've already smoothed out the bumps for you.

Do you chisel out your RFPs and proposals by hand every time?
Streamline the process using Uniformat and our master database of pre-formulated easy-to-edit statements. Our clear performance criteria, hard numbers, and phased substantiation requirements offer a smooth ride on your next design-build project.

The power and flexibility of a database, as easy to use as word processing.





The Construction Specifications Institute

DBIA

PerSpective™
The Performance System for Project Teams
A CSI/DBIA JOINT VENTURE PRODUCT

(PEAR)

For your 30-day free trial of PerSpective™, call toll-free 1.877.893.0896 or visit www.PerSpectiveNet.com

CD runs on Microsoft® Windows 95, 98, or NT

CIRCLE 91 ON INQUIRY CARD

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

ANSWERS

Questions appear on page 172. To receive CES credits, fill in the education reporting form below or on our Web site (www.architecturalrecord.com).

1. The marketing center and the network operations center both feature communication technology. While the network operations center is the focal point, and the technology to run the communications is foremost, the marketing center uses theatrical technology to showcase the communications operation.

2. The infrastructure was carefully planned to be expandable. Cable trays are roomy to allow for future expansion. Accessible storage for miles of fiber-optic and coaxial cable was planned. Each manager's console is an independent environment where computers turn on and off automatically.

3. The marketing center starts with external marketing strategies and ends with a look at the internal operations of the Global Network Operations Center. Potential clients are seated in a theater with a panoramic screen. Three projectors stream high-resolution digital images simultaneously. A seven-minute synthetic presentation excites the audience with a Dolby Digital Surround Sound system through 15 speaker cabinets and in-floor speakers. The panoramic screen then lifts swiftly into the wall above by theatrical rigging, revealing the GNOC; below the presentation then continues on 39 rear-projection screens located above the GNOC's own 80-foot panoramic presentation of real-life operations.

4. The design program for the AT&T facility developed from the need to plan for future technology advancements and to allow for complex relationships between spaces. Part of the design program was to identify crucial spatial adjacencies and prepare for unexpected contingencies. Ergonomics within the work environment was a design requirement, so that employees could individualize their space.

5. The use of electronic equipment created extra design problems. To run large quantities of electronic equipment continuously caused tremendous heat loads; extra chillers and a backup generator were needed. Another requirement was ease in access for maintaining equipment. Finally, planning for unknown technology requirements—"future-proofing"—was a special challenge.

AIA/CES EDUCATION REPORTING FORM

(Use to report learning unit hours earned for Architectural Record only.)

Member information:

Last Name **First Name** **Middle Initial or Name**

AIA ID Number

Program/project title: Architectural Record (11.00)

☐ "Future-Proof Design for a New Building Type" [page 165]

☐ "Designing with Daylight" [page 182]
Section sponsored by Hunter Douglas

Completion date (M/D/Y): _____ / _____ / _____
AIA/CES Credit: Each article or sponsored section will earn you one AIA/CES LU hour of health, safety, and welfare credit.
Fill in: ____ total LU hours.

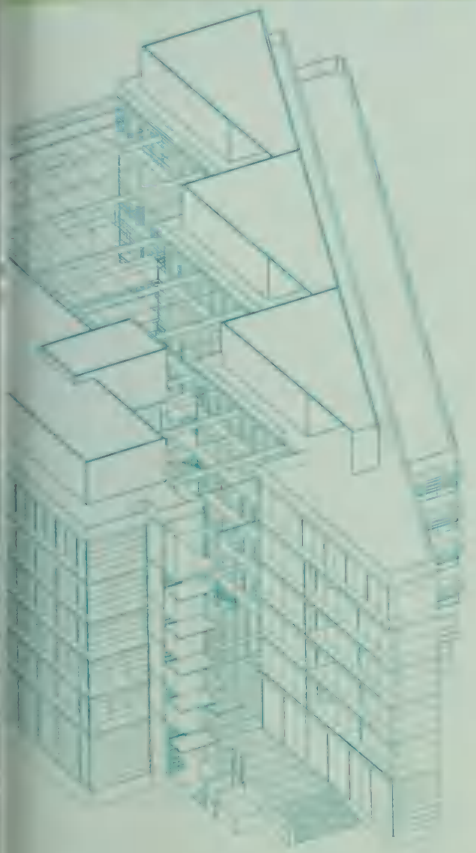
Material resources used:
Journal article or sponsored section: This article or sponsored section addresses issues concerning the health, safety, or welfare of the public.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

Send completed form to University of Oklahoma, Continuing Education, AIA/CES, Room B-4, 1700 Asp Avenue, Norman, OK 73072-6400; fax 405/325–6965. To respond by E-mail, visit www.architecturalrecord.com and click on Continuing Education. For more information, call 800/605–8229.

"GOOD DESIGN IS GOOD BUSINESS"



DESIGN STRATEGIES FOR THE NEW ECONOMY

A Conference Presented by

Business Week/Architectural Record

and The National Building Museum

in association with The American Institute of Architects

November 17, 2000

National Building Museum

Washington, DC

Join us for:

- A half-day conference bringing together key business leaders and architects discussing successful collaborations between architects and clients that result in the achievement of business goals.
- A showcase of the award-winning projects and a presentation honoring the recipients of the fourth annual Business Week/Architectural Record Awards.
- A special reception, immediately following the conference from 6 to 8 pm, for the opening of the National Building Museum's major new exhibition, "On the Job: Design and the American Office"

Sponsors:

BENTLEY

MILLIKEN

HermanMiller

THE AMERICAN INSTITUTE OF ARCHITECTS

ARCHITECTURAL RECORD
McGraw Hill Construction Information Group

BusinessWeek

NATIONAL BUILDING MUSEUM

CONFERENCE REGISTRATION FORM

To register, fill in and fax this form to: National Building Museum, 202-376-3564. Or access the registration form on www.architecturalrecord.com or on www.nbm.org. Registrations may also be mailed to: Good Design Conference, National Building Museum, 401 F Street, NW, Washington, DC 20001.

For further information or to register by phone, call 202-272-2448.

Registration fee: $55; $50 for members of the Museum and The AIA.

Please register me for "**GOOD DESIGN IS GOOD BUSINESS**" Conference. For multiple registrations, complete a separate form for each registrant.

Name _____ Title _____

Company _____

Address _____ City/State/Zip _____

Phone _____ Fax _____ E-mail _____

Form of Payment: [] AMEX [] MasterCard [] Discover Card [] VISA

Card Number _____ Expiration Date _____

Cardholder's Name (as it appears on the card) _____

Cardholder's Signature _____


The Web for Architects
www.aiaonline.com
Check it out–Today!
AIA ONLINE
NETWORK
AIA Convention & Expo
Pierpoint Product
Audited by BPA International.
THE AMERICAN INSTITUTE OF ARCHITECTS



Let your mouse outfox the sharks.

eProject Lead Manager. The most constructive way to manage the entire sales process.

Building on the power of the F.W. Dodge project news service, eProject Lead Manager combines extensive project news content with the interactivity to mobilize your team to action at any point in the bidding process.

With eProject Lead Manager, sales leads, customer relationships and market information can be tracked and managed with the speed, flexibility and security you need to keep the leads coming, the internal dialogue flowing and the sales process moving. Sort, track and compare leads. Develop sales strategies. Add notes and tasks, update project status and much more. Day and night, from anywhere. At the speed of the Internet. With no new technology required.

Visit www.construction.com

To see for yourself how eProject Lead Manager can help you manage your products and services more productively, visit construction.com for a brief overview, or call 1-800-FW DODGE.

F.W.DODGE
McGraw-Hill Construction Information Group

The Most Comprehensive, Most Accurate, Most Used Source of Construction Information.

CIRCLE 92 ON INQUIRY CARD

A Division of The McGraw-Hill Companies

ADVERTISERS INDEX

Bold: *indicates page number.*
Italic: indicates Reader Service Number.

PAGE NUMBER	READER SERVICE NUMBER	
54	*30*	A/D Fire Protection Systems Inc
177	*57*	AECdirect
234		AIA Convention
255		AIA Firm Survey
246		AIA Online
50-51	*28*	Andersen Commercial Group
9	*5*	Ann Sacks Tile & Stone
199	*66*	Architectural Area Lighting
249		Architectural Record Gift Subscription
235		Architectural Record Interviews
7		Architecturalrecord.com
2cov-1	*1*	Armstrong
164	*52*	Autodesk
233	*84*	B-K Lighting
218	*76*	Baldinger Architectural Lighting
35	*17*	BEGA
169	*53*	Bentley Systems Inc
28-29	*15*	BPB Celotex
181	*59*	Bricsnet US
201	*67*	Bruck Lighting Systems
44	*23*	Buddy Rhodes Studio
245		Business Week/Arch Record
173	*55*	Buzzsaw.com
69	*39*	Ceco Door Products
21	*13*	CENTRIA Architectural Systems
94	*49*	Ceramic Tiles of Italy
209	*71*	Charles Loomis
48-49	*27*	Copper Development Association
243	*91*	CSI/Construction Specifications Inst
60	*34*	DécorCable Innovations LLC
162-163		Dell
171	*54*	Design Within Reach
70	*41*	Doug Mockett & Company Inc
6	*3*	Dow Chemical Company, The
4	*2*	DuPont Corian
67	*38*	DuPont Fire Extinguishants
161	*51*	e-Builder
32	*16*	EFCO Corporation
242	*90*	Electronics Diversified Inc
195	*65*	elliptipar
192	*64*	Flos USA Inc
72	*43*	Follansbee Steel
247	*92*	FW Dodge, Div of McGraw-Hill Cos
188-189	*62*	Gardco Lighting
84-85	*47*	Georgia-Pacific
236	*86*	GR Plume Company
178	*58*	Graphisoft
230	*83*	Gypsum Association
224-225	*80*	Hambro/Canam
182-186	*60*	Hunter Douglas Architectural Prods
187	*61*	Hunter Douglas Architectural Prods
209	*72*	illuminating experiences
43	*22*	Imagine Tile
2-3		IMI/International Masonry Institute
70	*40*	Inclinator Co of America
46	*25*	Italian Trade Commission
41	*20*	IWP
207	*69*	Kim Lighting
92-93	*48*	Kinko's
190	*63*	Kramer Lighting
4cov	*100*	Kroin Incorporated
220-221	*78*	Lightolier
223	*79*	Lightolier
210	*73*	Litecontrol
216	*75*	Lutron
24-25	*12*	Marvin Windows & Doors
61	*35*	MBMA/Metal Building Mfrs Assn
26-27	*14*	MechoShade Systems Inc
229B	*82*	Mee Industries Inc
14-15	*8*	Meridian Project Systems Inc
136-137		Microsoft
226	*81*	Mitsubishi Chemical America Inc
37	*18*	Morgan
235	*85*	Mortar Net
39	*19*	National Gypsum Company
138	*50*	National Terrazzo & Mosaic Assn
3cov	*93*	Nemetschek North America
202-203	*68*	NEMO
229A		Northwest Energy Efficiency Alliance
209	*70*	Original Cast Lighting, The
71	*42*	Owens Corning
55	*31*	Parex Inc
76-77	*45*	PCI/Precast/Prestressed Concrete Inst
47	*26*	Pilkington
215	*74*	Prudential Lighting
237	*87*	Research Engineers
30-31		Revit Technology Corporation
18	*10*	Roppe Corporation
8	*4*	Royal Institute of British Architects
45	*24*	Sloan Valve Company
59	*33*	SMI/Spider Manufacturing Inc
62	*36*	Smith-Midland
174	*56*	Sony Electronics Inc
42	*21*	Speakman
219	*77*	SPI Lighting Inc
10-11	*6*	Steelcase
238-239	*88*	Sweet's, Div of The McGraw-Hill Cos
22-23	*11*	Technical Glass Products
75	*44*	Texas A&M University
65	*37*	Timely
240	*89*	Truebro
56	*32*	Vistawall Architectural Products
16-17	*9*	Vulcraft, A Division of Nucor Corp
52	*29*	Wayne-Dalton Corporation
12-13	*7*	Weather Shield Windows & Doors
83	*46*	Wiremold

For additional information on these advertisers, circle corresponding number on Reader Service Card, or visit our web site at ***www.architecturalrecord.com*** *and click on Advertiser Information.*

Executive Offices

The McGraw-Hill Companies
Two Penn Plaza
New York, NY 10121-2298

VICE PRESIDENT / PUBLISHER
Elaine Shusterman
(212) 904-3475 Fax: (212) 904-4652
shusterman@mcgraw-hill.com
Assistant: Monika Macezinskas

ADVERTISING DIRECTOR
David Johnson
(212) 904-6217 Fax: (212) 904-4652
dave_johnson@mcgraw-hill.com
Assistant: Joan Notaris

PRODUCTION MANAGER
Stephen R. Weiss
(212) 904-2793 Fax: (212) 904-6800
stephen_weiss@mcgraw-hill.com

PROMOTION DIRECTOR
Deborah Smikle-Davis
(212) 904-4558 Fax: (212) 904-6774
deborah_smikle-davis@mcgraw-hill.com

Advertising Sales

NORTHEAST / MID-ATLANTIC
Two Penn Plaza
New York, NY 10121-2298
Ted Rzempoluch
(212) 904-3603 Fax: (212) 904-4256
rzempoluch@mcgraw-hill.com

MIDWEST
One Prudential Plaza
130 East Randolph Street, Suite 400
Chicago, IL 60601-6213
Mike Gilbert (IL, IA, MN, MO, OH, W.PA, WV)
(312) 616-3338 Fax: (312) 616-3276
mike_gilbert@mcgraw-hill.com
David Johnson (IL, IN, KS, MI, ND, NE, OK, SD, TX, WI)
(312) 616-3339 Fax: (312) 616-3276
dave_johnson@mcgraw-hill.com
Assistant: Mamie Allegro

SOUTHEAST / MID-ATLANTIC
4170 Ashford-Dunwoody Rd.
Atlanta, GA 30319
Susan Shepherd
(404) 843-4770 Fax: (404) 252-4056
sshepherd@mcgraw-hill.com
Sales Assistant: Kathy von Broembsen

WEST (AZ, CA, CO, NM, NV)
Media Sales Associates
1750 Nantucket Circle, #134
Santa Clara, CA 95054
Bill Hague
(408) 492-9292 Fax: (408) 492-9797
(800) 830-4351 Fax: (253) 858-7576
billh@abptuf.org

WEST (BRIT. COLUMBIA, ID, OR, S. CA, UT, WA)
5901 S.W. Macadam Avenue, Suite 230
Portland, OR 97201
Bill Madden
(503) 224-3799 Fax: (503) 224-3899
billmad@msn.com

CANADA (EXCEPT BRITISH COLUMBIA)
48 Little Rebel Road, RR 3
Schomberg, Ontario L0G 1T0
Frank A. Spangenberg
(905) 939-0653 Fax: (905) 939-0654
spang@sympatico.ca

CLASSIFIED ADVERTISING / MANUFACTURERS' SPOTLIGHT / POSTCARD SERVICE
Ally Wingate
(800) 484-4042 ext 3042 Fax: (770) 889-9152
ally_wingate@mcgraw-hill.com

Editorial

(212) 904-2594 Fax: (212) 904-4256
www.architecturalrecord.com

Subscriber Service

(888) 867-6395 (USA only)
(609) 426-7046 Fax: (609) 426-7087
p64cs@mcgraw-hill.com

Back Issues

(212) 904-4635
phyllis_moody@mcgraw-hill.com

Reprints

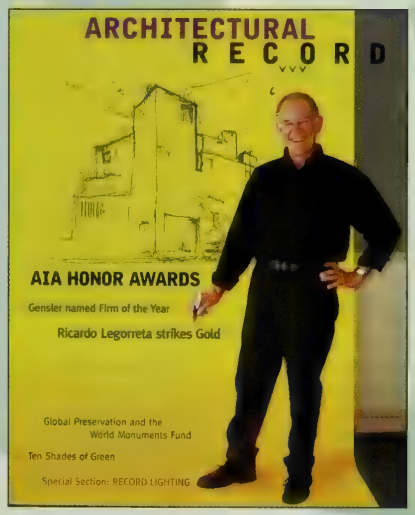
(609) 426-5129 Fax: (609) 426-5472
doreen_bitowf@pubs.mcgraw-hill.com

Reward your hard-working associates with a gift subscription to Architectural Record

Architectural Record is the perfect gift for new architectural professionals, colleagues, clients and staff members. Give the gift of the latest information on design ideas and trends, products, technology, and professional strategies with a subscription to *Architectural Record*. For a limited time, you can give gift subscriptions for the special low rate of $45, more than 20% off the basic rate! (U.S. only. Call for International pricing). And, additional discounts are available for multiple orders.

To take advantage of this special offer, call our Customer Service Department at 1-877-876-8093 (outside the U.S., call 609-426-7046). Or, visit our web site at **www.architecturalrecord.com** and click on the subscribe button.

We'll send the recipient a card announcing the start of the Gift Subscription.



Save 24%
off the annual basic rate

ARCHITECTURAL RECORD
McGraw-Hill Construction Information Group

Subscribe online at www.architecturalrecord.com
Or, call 1-877-876-8093 (Outside the U.S., call 609-426-7046).

New subscriptions only, please.

GD20011/GD20013/GDF20016

484-4042 ext 3042 / F: (770) 889-9152
Ally_Wingate@McGraw-Hill.com

Shipping Worldwide



Architectural Pottery is a commercial manufacturer of large landscape planters & ethnic reproductions in FIBER-CRETE (GFRC) ARCHSTONE (FRP) & ENGLISH STYLE SANDSTONE (with GFRC). Architectural Pottery is the largest importer of handmade Greek & Italian terra cotta in the U.S. Highlight your latest project with the finest imported and custom made pottery available. Call now for a free catalog (888) ARCHPOT or visit www.archpot.com; fax: 714-898-5109.

Architectural Pottery

CIRCLE 150 ON INQUIRY CARD

Turn the Ordinary Into the Extraordinary



Let Wausau Tile assist you in making your flooring and interior design shine with terrazzo tile and matching accessories. As the only domestic manufacturer of terrazzo tile, we have the unique ability to provide matching pieces such as copings and base, treads and risers, column covers, and so much more. Custom work is our specialty. Call 800-388-8728.

Wausau Tile

CIRCLE 151 ON INQUIRY CARD

Grand Manor Shangle®



CertainTeed's Grand Manor Shangle® is a super heavyweight shingle built on two full-size one-piece shingles with random 8" tabs applied on top. Patented shadow lines and a unique color palette give Grand Manor the look and depth of natural slate and wood. UL Class A. Lifetime limited, transferable warranty. Algae-resistant. UL Certified to meet ASTM D 3462.

CertainTeed Corporation

CIRCLE 152 ON INQUIRY CARD

Alpha Collection 2000 Aluminum-Stainless Steel



New and innovative design patterns and textures. Ideal for most vertical surfaces. Border to border standard sizes. Thickness from 0.025" to 0.064". Quantity discounts and free design consulting. Ask us about our custom capability. SD+T Marketing INC., Phone: 305-856-3825 TollFree: 877-626-2595 Fax: 305-856-1287 Email: sales@sdtmarketing.com Web: www.sdtmarketing.com

SD+T Marketing Inc.

CIRCLE 153 ON INQUIRY CARD

Ludowici Roof Tile

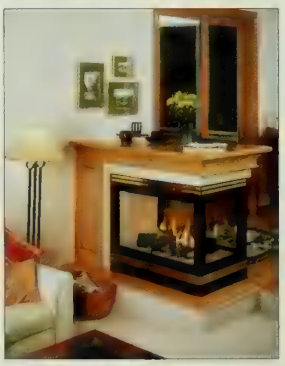


After more than 100 years, Ludowici clay roof tiles remain the preferred choice of architects and building professionals. No other clay tile manufacturer offers more colors, styles, fittings, textures, or finishes. And every tile is backed with a 75-year limited warranty (see actual warranty for details.) Call for full-color brochure or visit www.ludowici.com

CertainTeed Corporation

CIRCLE 154 ON INQUIRY CARD

Three-Sided Fireplace for Unlimited Installations

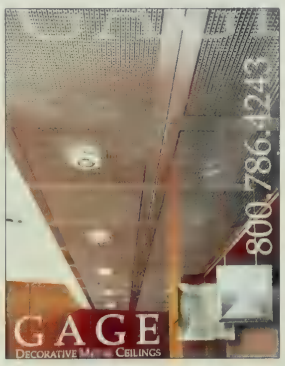


Heat-N-Glo introduces model PIER-TRC, a three-sided direct vent fireplace that can be terminated vertically or horizontally to accommodate nearly any application. The PIER-TRC is perfect as a room divider, bar, end of counter or a wide variety of creative installation possibilities. As with all Heat-N-Glo fireplaces, the PIER-TRC can be operated by remote control for the ultimate in convenience. Call 888-427-3973.

Heat-N-Glo

CIRCLE 155 ON INQUIRY CARD

Gage Metal Ceilings

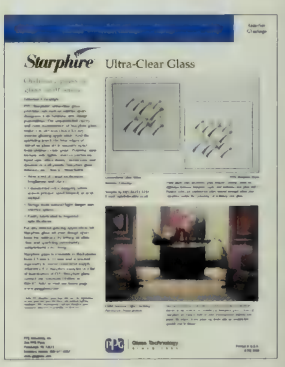


The Gage Corporation, Int., designs and manufactures the world's foremost collection of decorative metal ceilings. Design #447 (photo) is a good example of selective two-directional brushing with custom perforations from Gage's "Honest Aluminum" collection. Concealed suspension provides a clean monolithic appearance. Call the factory at 800-786-4243 for introductory samples and literature.

The Gage Corporation

CIRCLE 156 ON INQUIRY CARD

Starphire Glass



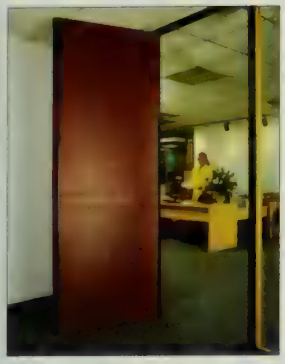
This design kit demonstrates why Starphire® glass is the clear choice for beautiful results. Vision, safety/security, spandrel, skylite, and interior glazings can sparkle from the jewel- like brilliance of ultra-clear Starphire glass. See for yourself why ordinary glass is green with envy: call 800-377-5267 to request a kit or a glass sample.

PPG Industries

CIRCLE 157 ON INQUIRY CARD

T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Applications



The new flush exit device is designed for use on TOTAL DOORS in single, pairs & double egress pairs. Ideal for corridor & elevator lobby applications in all commercial facilities. The exit device allows continuous, uninterrupted sightlines in corridors when doors are pocketed in the open position. Its quiet operation is ideal anywhere noisy hardware is a problem. TOTAL DOORS can be retrofitted into existing door frames, saving time & expense.

Openings

CIRCLE 158 ON INQUIRY CARD

GSR Door Coordinator System



DORMA Architectural Hardware's GSR coordinator system provides correct sequential closing of pairs of doors equipped with overlapping astragals, panic devices, flush bolts and a cylindrical lock, or other door hardware assemblies that require one door to close before another. The frame-mounted coordinator features a streamlined design and needs ceiling clearance of only 1-5/8". For more information, call DORMA at (800) 523-8483 or visit www.dorma-usa.com

DORMA

CIRCLE 159 ON INQUIRY CARD

Concrete Waterproofing by Crystallization

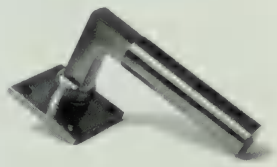


Applied as a slurry coating Xypex is a chemical treatment that waterproofs by penetrating the concrete with a crystalline formation that "plugs" the pores of the structure preventing water seepage. Xypex is ideal for use on the "inside" of wet underground structures.

Xypex Chemical Co.

CIRCLE 160 ON INQUIRY CARD

NANZ



The No. 2006 is a Bauhaus handle based on a Walter Gropius design. Nanz manufactures this and a wide range of other levers, knobs, locks, hinges and cabinetry hardware. Fax a request for our free Product Selection Guide or our $20 catalogue featuring this and over seventy other handles. Phone 212-367-7000, fax 212-367-7375. www.nanz.com

Nanz Custom Hardware Inc.

CIRCLE 161 ON INQUIRY CARD

Ornamental Picket Fence with a Purpose



We have given special attention to each & every component of our fence. Every item is designed for strength, durability and low maintenance. No other company builds a complete fence — rail, rivets, brackets, pickets and posts, that is stronger, more durable, have more security or lower maintenance costs than our fences. Monumental Iron Works, 6500 Eastern Ave., Baltimore, MD 21224. Tel: 410-633-6500, Fax: 800-239-2963.

Monumental Iron Works

CIRCLE 162 ON INQUIRY CARD

Curved Solutions



Luxalon Curved Solutions, an exposed grid system by Hunter Douglas, provides the opportunity to create both volume & sculpture. Flowing ceiling surfaces can complement a variety of interiors & enhance acoustical performance. Available in both stocked radii & custom radii, Curved Solutions metal ceiling systems are economical & easy to install. For additional information call 800-366-4327 or visit www.hunterdouglasceilings.com

Hunter Douglas, Inc.

CIRCLE 163 ON INQUIRY CARD

Record Houses "Virtual Reality" CD-ROM



A room-by-room tour, with architects discussing their creative and product decisions. Click and zoom and move around objects via QuickTime©VR. Architectural Record worked closely with Graphisoft©, using ArchiCAD©, to produce an interactive CD-ROM house tour that includes photos and excerpts from the articles from the April '97 issue. For Windows and Mac. $24.95. Record Houses CD-ROM, Two Penn Plaza, NY, NY 10121-2298.

Record Houses

CIRCLE 164 ON INQUIRY CARD

Melton Classics



Melton Classics architecturally correct columns, balustrades, and architectural details, are the industry standard for quality and design. Columns are available in fiberglass, resin composite, GFRC, GRG and wood. MarbleTex™ Balustrades and columns are integrally Colored and require no painting. Ask us about our complete line of architectural ornamentation in Melton Stone™ cast stone. 800-963-3060, www.meltonclassics.com

Melton Classics

CIRCLE 165 ON INQUIRY CARD

T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

New Fire Retardant Treated Wood Catalog

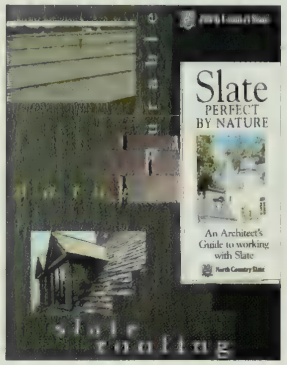


Order the latest treated wood catalog from Hoover Treated Wood Products, Inc. PYRO-GUARD® and EXTERIOR FIRE-X® are the featured products. CCA KDAT and COP8® preservative treatments along with PLY-WALL Sound Barrier System are included. Visit Hoover's web site at www.frtw.com. For a free catalog call 1-800-TEC-WOOD (832-9663) or e-mail hoover@frtw.com.

Hoover Treated Wood

CIRCLE 166 ON INQUIRY CARD

Slate Roofing

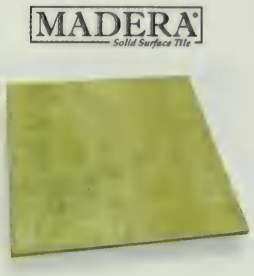


Natural North Country slate. For enduring character, nothing else compares. No wonder—it's perfected by nature! Free product brochure showcases the wide variety of sizes and colors, and comes with our Architect's Guide to working with this remarkable roofing material.

North Country Slate

CIRCLE 167 ON INQUIRY CARD

Matrix Composites Inc.

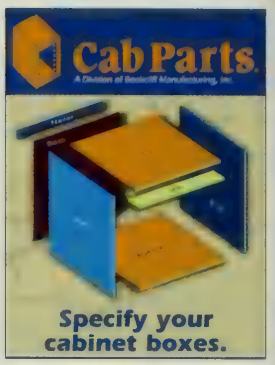


Chosen by a distinguished panel of Architects for Architectural Record as one of the best new finishes for 1999, Madera Tile is made from an exciting new material known as Lignasil.® Using 100% post-use hardwood in a patented process, Madera forges new ground in "green" building material technology. Several textures are available in an exciting range of solid colors and unique color blends for your sustainable design solutions. Call 800-767-4495. www.maderatile.com

Matrix Composites Inc.

CIRCLE 168 ON INQUIRY CARD

Specify This.



Did you know one of the most cost-effective ways to produce high-quality, frameless cabinet systems is CabParts? With over 1,500 sizes and types of cabinet boxes, CabParts are easily assembled to produce cabinet installations of superior quality. Precisely dimensioned, fixed pricing and high-density shipping mean you have more control over Division 6000 results than possible through alternatives. Call 970-241-7682 or visit our website for the full story. www.cabparts.com

CabParts

CIRCLE 169 ON INQUIRY CARD

UV/FX Scenic Productions



UV/FX wrote the book on Ultra-Violet Visual Effects which are designed, art directed and painted (and now even printed). UV/FX specializes in Dual Images, Complete Invisible treatments, Day to Night Effects, 3-D scenery and more for changing themed walls, backdrops and ceilings. www.uvfx.com, Tel/Fax 310-392-6817.

UV/FX

CIRCLE 170 ON INQUIRY CARD

Fireframes™

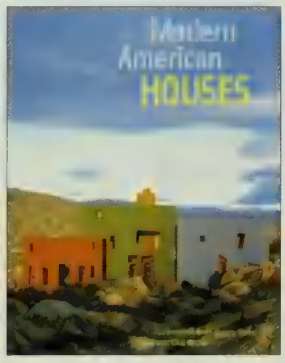


Technical Glass Products introduces Fireframes™ – fire-rated door and window frames with sleek, European styling. Fireframes™ allow large expanses of glass, and are well-suited to applications where aesthetics are important. Available in a Designer Series and a Heat Barrier Series, the doors and frames carry ratings up to 2 hours. For complete information call 800-426-0279 or visit www.fireglass.com

Technical Glass Products

CIRCLE 171 ON INQUIRY CARD

Modern American Houses



This 230-page book is packed with color photographs of more than 75 houses featured in Record Houses since 1956. New essays explore the evolution of home design decade by decade–Thomas Hines on the '50s, Robert Campbell on the '60s, Suzanne Stephens on the '70s, Charles Gandee on the '80s and '90s. $49.50. To order please call 212-904-4635.

Record Houses

CIRCLE 172 ON INQUIRY CARD

ADA Insulation Safety Covers



Plumberex Specialty Products, Inc. is the only company that manufactures a complete line of ADA safety covers for commercial & residential applications, meeting all building & fire codes with a -0- smoke rating. The Handy-Shield™ Safety Cover is the one and only ADA safety cover on the market with a "Dual" fastening system to help deter theft! For more information call 800-475-8629, Website: www.plumberex.com or email: plumberex@earthlink.net

Plumberex Products, Inc.

CIRCLE 173 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Projections by Clay Paky



Clay Paky Display Line projection systems are ideally suited for many types of applications including retail, exhibits, restaurants/bars, museums, banks, reception areas, showrooms, hotels and much more! These state of the art projection systems are user-friendly and compact with a wide range of available accessories. They are backed by a full two-year warranty and a team of lighting professionals committed to providing you with expert consultation and outstanding service. Call today for your free color brochure and video! 916-939-6655 Email: michaelp@g1ltd.com

Group One, Ltd.

CIRCLE 174 ON INQUIRY CARD

Hot Off The Press



Since 1927, plastic laminate has been recognized for its contemporary design, durability and cost/value over alternative options. VT Industries Inc., is offering a free special report that examines the development, advantages and surge in popularity of decorative laminates – once described by Time magazine as the "material of a thousand uses." Call VT Industries today to ask for the free special report at 800-827-1615, ext. 210.

VT Industries

CIRCLE 175 ON INQUIRY CARD

Decorative, Thin-Film Intumescent Fireproofing



Improved spray characteristics & ratings up to 3 hours! A/D FIREFILM® II permits designers to use the appearance of exposed steel with the steel protected from fire. The product is applied as a thin-film coating 0.4 to 3.3 mm (16 to 130 mils) thick. When exposed to fire it expands to form a meringue-like insulating layer up to 4 in. thick. A/D COLORCOAT topcoat is available in a wide range of colours. Call 800-263-4087 or 416-263-4087. Internet: www.adfire.com See us in Sweets.

A/D Fire Protection

CIRCLE 176 ON INQUIRY CARD

Site Furniture of Distinction



Keystone Ridge Designs, Inc. is the architect's choice for premier site amenities. Offering a full line of steel furnishings, we pride ourselves on exclusive designs and our patented powder coat finish, KEYSHIELD,™ that is unparalleled in the industry. Quality, craftsmanship, and dedication to your creative vision are the hallmarks of Keystone Ridge Designs. For more information please call 800-284-8208 or e-mail: KeystonRdg@aol.com. www.keystoneridgedesigns.com

Keystone Ridge Designs

CIRCLE 177 ON INQUIRY CARD

Interactive Whiteboard

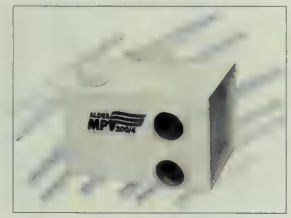


The Rear Projection SMART Board™ is an interactive whiteboard that allows you to control projected Windows® or Macintosh® applications and other multimedia by pressing on the Board's large, touch-sensitive surface. Write over top of applications and your notes are saved for future reference and distribution. Architects and facility designers can request the SMART Product Kit by calling 888-427-6278 or by visiting www.smarttech.com/productkit

SMART Technologies Inc.

CIRCLE 178 ON INQUIRY CARD

Ventilate All Baths With One Quiet Fan



ALDES' MPV fan is designed for multiple and extensive duct runs. Remote mounting of fan assures almost silent operation. Up to 6 exhaust points at 50 cfm each. Equipped with a continuous duty motor, the MPV may be used also to provide IAQ Ventilation. Super Quiet, Powerful & Versatile. 3 year warranty. Cost Effective. American ALDES Ventilation Corp. 4537 Northgate Court, Sarasota, FL 34234, Call 800-255-7749, www.americanaldes.com

American ALDES

CIRCLE 179 ON INQUIRY CARD

Dodge-Regupol Launches ECOsurfaces™

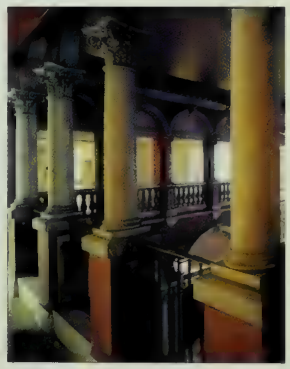


Dodge-Regupol (DRI), the world's largest converter of post-consumer tire rubber, launches ECOsurfaces™, xtreme recycled rubber™ flooring for both indoor & outdoor commercial applications. Not only environmentally sound, but also available in 38 vibrant colors, ECOsurfaces in rolls & tiles responds directly to designers' needs & their budget concerns. For a fresh new colorful way to create attractive environments, call Gerbert Ltd. at 877-ECOsurfaces (877-326-7873).

Gerbert Ltd.

CIRCLE 180 ON INQUIRY CARD

GFRC and GRG Classic™ Architectural Ornamentation



GFRC Classic™ glass-fiber reinforced cement & GRG Classic™ glass-fiber reinforced gypsum architectural ornamentation from Melton Classics offers the construction professional durability, economy, & superior design flexibility with reduced weight. Manufactured from completely non-combustible materials, columns, cornices, domes, & mouldings, are just a few of the architectural product options available from our large inventory of standard molds. For addiional information call 800-963-3060 www.meltonclassics.com

Melton Classics

CIRCLE 181 ON INQUIRY CARD

800-484-4042 ext.3042 — F: (770) 889-9152
Email: Ally_Wingate@McGraw-Hill.com

ORBIS Luminaires

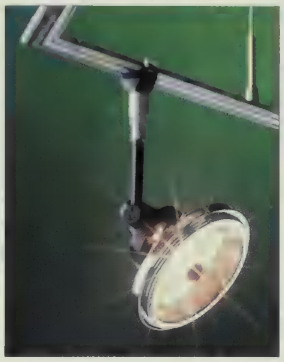


New ORBIS luminaires from EXCELITE feature translucent faux alabaster or uniform color diffusers in three diameters. Arrange ORBIS for close-to-ceiling, pendant, or wall mounting. Designed for compact fluorescent lamps up to two 32-watt triple tubes. Exclusive lift-and-rotate diffuser connection allows a discrete, completely unadorned look, or enhance the luminaire with a selection of ornaments as shown.

EXCELITE, Inc.

CIRCLE 182 ON INQUIRY CARD

Boa Two-Circuit Track System



Bruck Lighting, the international leader in innovative low-voltage cable and track systems, introduces Boa, a low-voltage two-circuit track system with dual switching ability. Boa may be suspended or flush mounted, installed vertically or horizontally and is available in chrome or matte chrome. All Bruck Uni-lights fixtures can be utilized with Boa as well as all seven other Bruck track systems. www.brucklighting.com

Bruck Lighting Systems

CIRCLE 183 ON INQUIRY CARD

Doyle Crosby's "Mercury"



Architecturally elegant and ADA compliant, the "Mercury" sconce is a striking source of decorative lighting. The solid brass stem is crowned with a glowing frosted glass chimney or with a fine linen shade for more traditional settings. Finished in polished nickel, polished brass or satin nickel. www.boydlighting.com

Boyd Lighting

CIRCLE 184 ON INQUIRY CARD

WILA Light-in-Light System

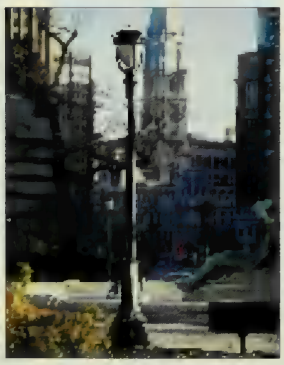


The WILA Light-in-Light system is available in two aperture sizes (10" & 15") & utilizes triple tube compact fluorescent lamps (18, 26, 32, & 42 watt) mounted vertically for maximum efficiency & even light distribution. The central concentrating reflector is computer designed for maximum efficiency & is formed of high purity (99.98 AL) aluminum with an inner finish of secular alzak & an outer finish of high reflectance powder coat white enamel which coincides with the finish of the broad beam outer reflector & cast trim ring.

WILA Lighting, LLC

CIRCLE 185 ON INQUIRY CARD

Cast Aluminum Lighting



Sun Valley Lighting manufactures an extensive line of Standard & Custom cast aluminum lighting poles & fixtures in all period styles. Our 50 years of design & manufacturing experience provides you with unexcelled product quality. Our staff of designers, engineers, and tool makers are here to assist you. Our in-house foundry assures quality and prompt delivery at competitive costs.

Sun Valley Lighting

CIRCLE 189 ON INQUIRY CARD

Xenon Luminaries



Space Cannon Illumination Inc. introduces the Litehose, the latest in linear lighting technology made of extruded, durable optical-grade acrylic. Available in different diameters and sizes, reflective paints and films are not required. The Focus is an architectural colored luminarie utilizing a 1200w lamp source designed to work with the Litehose or separately. 888-705-1028.

Space Cannon

CIRCLE 187 ON INQUIRY CARD

Outwater Lighting Concepts



Low-Voltage Halogen Lighting; Fiber Optic Lighting; Track Lighting; Recessed Lighting; Showcase Lighting; Shelf & Under Cabinet Lighting; Exhibit & Picture/Portrait Lighting; Cove Moulding Lighting; Task Lighting; Canister Lighting; Swivel Lighting; Adjustable Spotlights; Linear Lighting; Ambient Lighting; Curio Lights; Fluorescent Lighting; Rope Lighting; All Related Accessories. Free Catalog 888-OUTWATER; Web site: www.outwater.com

Outwater

CIRCLE 188 ON INQUIRY CARD

Add Brightness and Beauty to Any Structure



Available exclusively from Schott Corporation, Okalux® light diffusing panels provide shadowless light with true color rendition that won't change over time. Used in the skylights at MacArthur Center Mall in Virginia, they create a bright, airy atmosphere. Okalux® also offers great thermal insulation, UV protection, and sound insulation.

Schott Corporation

CIRCLE 186 ON INQUIRY CARD

NOW AVAILABLE!



Firm Survey Hard Facts

AIA Firm Survey 2000–2002

The most accurate and comprehensive source of financial- and practice-management information presents responses collected from over 1,700 architecture firms across the U.S.

$95/$35 AIA Members

ISBN 1-57165-000-8

To order call
800-365-ARCH

LEGAL NOTICE
U. S. POSTAL SERVICE
STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION
(ACT OF AUGUST 12, 1970; SECTION 3685, TITLE 39, UNITED STATES CODE)

1. Title of publication: Architectural Record
2. Publication number: 132-650
3. Date of filing: October 1, 2000
4. Frequency of Issue: Monthly.
5. Number of issues published annually: 12.
6. Annual subscription price: $59.
7. Complete Mailing Address of Known Office of Publication: 1221 Avenue of the Americas, New York, NY 10020.
8. Complete Mailing Address of Headquarters of General Business Offices of the Publisher: Two Penn Plaza, New York, NY 10121-2298
9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor: Vice President/Publisher: Elaine Shusterman, Two Penn Plaza, New York, NY 10121-2298; Editor: Robert Ivy, FAIA, Two Penn Plaza, New York, NY 10121-2298; Managing Editor: Ingrid Whitehead,Two Penn Plaza, New York, NY 10121-2298.
10. Owner: The McGraw-Hill Companies, Inc., 1221 Avenue of the Americas, New York, NY 10020. Stockholders holding one percent or more of outstanding common stock: Harold W. McGraw, Jr. Trust; William H. McGraw; Elizabeth McGraw; Donald C. McGraw, Jr.; John L. McGraw; JMM Family Limited Partnership; all c/o The McGraw-Hill Companies, Inc, 1221 Avenue of the Americas, New York, NY 10020. Bankers Trust c/o Proxy Unit MS7230, 548 Grassmere Park Drive, Nashville, TN 37211; Chase Manhattan Bank c/o Mail Processing Proxy, 1 Chase Manhattan Plaza, New York, NY 10081; Fidelity Investments c/o Compliance Dept., 82 Devonshire Street, Boston, MA 02109; Investors Bank & Trust c/o Corporate Actions Dept., 89 South Street, Boston MA 02111; Putnam Investment Management, 1 Post Office Square, Boston, MA 02109; State Street Bank c/o Global Proxy Unit, P.O. Box 1631, Boston, MA 02105; University of California c/o Treasurer of the Regents, 1111 Broadway, Oakland, CA 94607.
11. Known bondholders, mortgagees, and other security holders owning or holding one percent or more of total amount of bonds, mortgages or other securities: None.
12. Not applicable.
14. Issue date for circulation data below: September 2000
15. Extent and nature of circulation:

A. Total number of copies—average number of copies of each issue during preceding 12 months, 114,409; actual number of copies of single issue published nearest to filing date, 115,276. **B.** Paid and/or requested circulation—**(1)** Paid or requested outside-County mail subscriptions stated on Form 3514—average number of copies of each issue during preceding 12 months, 95,256; actual number of copies of single issue published nearest to filing date, 95,476. **(2)** Paid In-County subscriptions—average number of copies of each issue during preceding 12 months, 0; actual number of copies of single issue published nearest to filing date, 0. **(3)** Sales through dealers and carriers, street vendors and counter sales, and other non-USPS paid distribution—average number of copies of each issue during preceding 12 months, 11,413; actual number of copies of single issue published nearest to filing date, 12,539. **(4)** Other classes mailed through the USPS—average number of copies of each issue during preceding 12 months, 0; actual number of copies of single issue published nearest to filing date, 0. **C.** Total paid and/or requested circulation—average number of copies of each issue during preceding 12 months, 106,669; actual number of copies of single issue published nearest to filing date, 108,015. **D.** Free distribution by mail—**(1)** Outside County as stated on Form 3541—average number of copies of each issue during preceding 12 months, 3,255; actual number of copies of single issue published nearest to filing date, 3,318. **(2)** In-County as stated on Form 3541—average number of copies of each issue during preceding 12 months, 0; actual number of copies of single issue published nearest to filing date, 0.**(3)** Other classes mailed through the USPS—average number of copies of each issue during preceding 12 months, 0; actual number of copies of single issue published nearest to filing date, 0. **E.** Free distribution outside the mail—carriers and other means—average number of copies of each issue during preceding 12 months, 2,969; actual number of copies of single issue published nearest to filing date, 2,343. **F.** Total free distribution —average number of copies of each issue during preceding 12 months,6,224; actual number of copies of single issue published nearest to filing date, 5,661. **G.** Total distribution—average number of copies of each issue during preceding 12 months, 112,893; actual number of copies of single issue published nearest to filing date, 113,676. **H.** Copies not distributed—average number of copies of each issue during preceding 12 months, 1,516; actual number of copies of single issue published nearest to filing date, 1,600. **I.** Total—average number of copies of each issue during preceding 12 months, 114,409; actual number of copies of single issue published near est to filing date, 115,276.**J.**Percent of paid and/or requested circulation:averagenumber of copies of each issue during preceding 12 months, 94.5%; actual number of copies of single issue published nearest to filing date, 95.0%.

17. I certify that the statements made by me are correct and complete. The McGraw-Hill Companies, Elaine Shusterman, Vice President/Publisher

GET CONNECTED!
GO TO
www.architecturalrecord.com

NEW! Daily Headline &– Late Breaking News

People & products behind projects in *Record*

Digital products buyers' guide
Technology product reviews

Sustainable resources
Guide to green products

Building technology
Continuing education

Index to past issues

"From the Field" Editor's Journal

Career opportunities & online job fairs for additional positions

Links to advertiser web sites & product information ... and more

Architecturalrecord.com:
YOUR LINK TO
THE WORLD OF ARCHITECTURE.

Although architecture firms have benefited in many ways from the continued economic boom, the tight job market, which has improved only slightly in the past year, has kept the squeeze on managers.

The seven-year economic boom has translated into sustained prosperity and growth for many U.S. architecture firms. According to the American Institute of Architects' Firm Survey 2000-2002 preliminary reports, gross firm billings were $10.2 billion in 1990, $14.4 billion in 1996, and reached $23 billion by last year.

At home, growth continues. According to F.W. Dodge, architect-designed building project types are projected at $376 billion for next year, representing 3 percent growth in the commercial/manufacturing and institutional fields, and seven percent growth in multifamily housing. This continued strength has resulted in changes within the architecture industry. As a result of this continuing strength, half of all firms grew last year and more than a third of them expanded by 20 percent. Expanding staff to keep up with this growth has proven to be a challenge.

Finding and Keeping the Best and Brightest

The labor market has been tight for the past several years, but it's difficult to gauge how dramatic that trend is from year to year. The U.S. Department of Labor and the AIA, for instance, do not keep available-position data; the methodology is just too unreliable.

It is clear that the market for those with three to seven years of experience is particularly tight. As few firms were hiring in the early 1990s, many young architects left the field. Now those who would be ready for mid-level jobs are nowhere to be found, and some firms find themselves relying on more inexperienced professionals to pick up the slack.

Architecture firms have been responding to these trends by reassessing many aspects of their management approach. In areas such as compensation, continuing education, benefits, profit-sharing, ownership or perks, this means finding ways to catch up with other industries. In other cases, it means taking care to guard, nurture, and promote what sets them apart from other firms, such as firm culture, type and quality of work, possibilities for advancement and individual growth.

> Firms know that they must find ways to achieve parity with other industries on compensation, continuing education, benefits, profit-sharing, ownership & perks.

There is some good news. "Our sense is that the mad scramble has lessened," says Frank Ricks, AIA, founding partner of Looney Ricks Kiss (LRK), with offices in Memphis, Nashville, and Princeton. "We are busy and are looking to fill several positions, but again are able to be highly strategic about how and when we do that." The gap in the market still smarts, though. "The lack of people with five to fifteen years of experience continues to create difficulties for us that I'm sure other firms are feeling, too. From a project management and fee standpoint, it continues to present a challenge."

Compensation, Benefits, and Ownership

"We had been seeing annual compensation gains in the 7-8 percent range," says the AIA's Chief Economist Kermit Baker. "That has slowed a bit, but there's still growth." Baker says that he has not seen evidence of fees rising, however. "Firms say they are busy, and that hit rates are high. We've been hearing about 50 percent hit rates for private projects, for instance. But there's still resistance to raising fees. And we are still hearing about fixed-fee structures that involve a great deal of risk for the architecture firm. However, profitability is rising somewhat." That rise can be attributed to a wide range of factors, including efficient technology tools.

To avoid toppling the salary structure, many firms use bonuses and other compensation tactics to keep base salaries from growing too much or too fast. Profit-sharing is now being seen at a greater number of firms. Signing bonuses, once unheard of in this field, are being offered from time to time. According to last year's AIA Compensation Survey, salaries were 10 to 20 percent higher in larger firms. Average compensation for principals and partners with 50 or more employees, the study notes, was 67 percent greater than for firms with fewer than 10 employees, although this gap might in part stem from how compensation packages are designed.

Just a decade ago, many firms didn't offer the benefits and perks common to other industries; according to the AIA survey, just 64 percent of firms offered medical insurance in 1990. Today, 95 percent do.

In recent years, providing the opportunity for an equity stake in the firm has become a more common incentive. For many firms, broad ownership is an important strategy. Managers say that members who choose to be involved in firm ownership and participate in strategic planning prove to be the most engaged and committed.

Richard White, a consultant who has worked with the Tsoi/Kobus & Associates (TK&A), an architecture, interior design, and planning firm in Cambridge, Massachusetts, says "something unusual is going on at TK&A. They have an unusually low rate of turnover. The staff is loyal and happy. Clients, therefore, get a smoothly functioning team that doesn't have to reinvent the wheel with every job."

Pursuit of Excellence

At the end of the day, talented people want to be valued team members at firms that are designing exciting projects. Some young architects appreciate firms that allow them to be involved in a range of projects (different building types, at a range of scales). Others desire more responsibility, a more varied exposure to areas of the firm, or the chance to specialize and move up. At some firms, talented architects at various levels cite the management's commitment to design excellence or to documenting the work extensively. Mentoring is also something that many young professionals cite as important. Many firms are testing mentoring programs that range from the ad hoc to the very structured.

David J. Brotman, FAIA, vice chairman of RTKL, who works in the firm's Los Angeles office, says his firm's annual four-day design conference is an important perk. The confer-

TSOI / KOBUS & ASSOCIATES
ARCHITECTS
www.tka-architects.com

The firm is dedicated to providing excellence in design, offering the highest level of comprehensive, professional services to clients; and creating a stimulating and challenging environment for its employees.

TK&A



- One of the largest firms in the Boston area
- Specializing in Academic, R&D, Healthcare, Office & Hotel Facilities
- Winner of 50+ design awards this decade
- One of the country's "Best Managed Firms," *Architectural Record*
- "Top 500 Design Firms," *Engineering News-Record*
- "Top 50 Global Giants," *Architecture*
- "Top One Hundred Interior Design Giants," *Interior Design*
- "2000 Small Business of the Year," Greater Boston Chamber of Commerce

Employment Opportunities

Designer/Architects
Project Managers
Construction Administrators
Technical Architects
Interior Designers

Please send your resume to:
Cheryl Egan
Director of Human Resources
cegan@tka-architects.com

One Brattle Square
P.O. Box 9114
Cambridge, MA 021138-9114
Tel: 617.491.3067
Fax: 617.864.0265

Lucent Technologies • Millennium Pharmaceuticals • Children's Hosptial Boston • Harvard University • Washington University • Suffolk University Law Schoool • UMass Medical School • University of Chicago Hospitals

ence involves 20 designers from each of the firm's offices. They share what they are working on, talk about philosophy of design, and tour important new architecture works in the surrounding area. "This kind of cross-pollination really energizes people, and also reminds them that their intellectual and professional growth is important to us as a firm," he says.

Michael K. Powers, CEO and president of Symmes Maini & McKee Associates, notes that "insisting on quality" is important to both the success of the firm with clients and the success of the firm as a collection of individuals. "There's no question—employees are the strength of the company," he says.

Prospects are looking for firms with a well-defined, supportive firm culture, a commitment to quality work, & a concern for individual growth.

A Learning Culture

Management consultant Donna Gaines, of Gaines International in Chicago, says that "many architects are very much like those in the information technology business; they want to work in a cool place, with good lighting, where there's a sense of fun." Wish lists have expanded, she has found. Today, issues run the gamut, including casual dress, a family friendly environment (competitive maternity leave, paternity leave, adoptive parent leave, babysitting facilities), employee recognition (theater or sports event tickets and other perks for those going beyond the call), and pay and benefits for overtime.

Throughout the industry, job candidates of all experience levels now identify their growth potential at a firm as an important consideration. Increasingly, firms have been refining their approach to professional education. Gensler is an oft-cited industry model, for example. The firm has been recognized by the AIA and other organizations for its approach to continuous learning, as it provides some tuition reimbursement and offers a broad set of internal educational programs.

"Our studio approach to design combines small-firm culture with the power of an internationally acclaimed architecture firm, "J. Robert Hillier, FAIA, has said of the Hillier Group, based in Princeton, N.J. "Team Hillier," as the company refers to its people, is a very diverse group. "We're looking for innovators who can help lead Hillier into the future."

LRK in Memphis recently instituted a program called One Firm learning, modeled on workshops that initially involved senior management. In groups of 30, all employees of LRK spend four days off site, engaged in experimental learning, team-building exercises, discussions of the firm's values statement, and storytelling that introduces employees to the institutional memory of the organization. The response, Ricks says, has been very positive. He believes that people at all levels of the organization notice and respond to such investments. Another recent investment: the Memphis office's new downtown digs, which are designed to be fun, collaborative, and embody the team orientation.

At Symmes Maini & McKee Associates, we explore space everyday...without ever leaving the earth.

*When it comes to creating the right space... we've come up with some ideas that are truly out of this world...at **SMMA.***

We're a leading multidisciplinary design firm that offers architecture, engineering, planning, and interior design collaboration.

Our diverse client base and wide variety of projects reflect our desire to take on every challenge and meet it. Forget a world of opportunity...how about a whole universe?

*Explore **SMMA.***

SMMA

ISO 9001 Certified Company

■ Architectural Professionals

Project Architects/Designers

Proficiency in all phases of medium and large-scale projects required. Institutional, commercial and/or advanced technology experience strongly desired. Specific openings include:

- **Graduate Architects/CAD Drafters**
- **Assistant Project Architects**
- **Architects**
- **Interior Designer**
- **Project Manager**
- **Civil Engineers**
- **Landscape Architects**

One small step for you, one giant step for your career. At SMMA, we offer outstanding growth potential, as well as an excellent salary and benefits package, including 401(k), Employee Stock Ownership Plan, tuition reimbursement, referral bonuses and more. In addition to these benefits, SMMA continues to look for ways to make our employees' working environment enjoyable. We offer flex-time, paid sick time, vacation and company sponsored functions. We are proud to have a highly respected and professional staff in all design disciplines. If you are looking for a firm that truly values its employees, take a closer look at SMMA. Please e-mail your resume, indicating position of interest, to: **m_higgins@smma.com.** Or mail it to: **Symmes Maini & McKee Associates, Attn: Margo Higgins, 1000 Massachusetts Ave., Cambridge, MA 02138.** EOE/AA/ADA. No phone calls, please.

For more information about these and other opportunities, please visit our Web site: **www.smma.com**

PROFILE:
HILLIER

Building on a foundation of award-winning projects and client-focused service, Hillier runs nine offices with a total of 460 employees---the Hillier Team. They are in Princeton, N.J.; New York; Newark, N.J.; Philadelphia, PA; Scranton, PA; Washington, D.C.; Kansas City, MO; Dallas; and London.

Current company wide openings have created the need for interns as well as professionals with three to eight years of experience in corporate offices, interiors, academic building, campus planning, healthcare facilities, research facilities, libraries, hotels, and resorts.

Diverse projects include a medical library for Howard University in Washington, D.C.; the Concord Hotel in Kiamesha Lake in New York; interiors for the New York City showrooms of Givenchy and Christian Dior; projects for the New York University Medical Center; as well as the largest corporate projects on both sides of the Atlantic---the Sprint International Headquarters in Overland Park, Kansas, and SmithKline Beecham's World Headquarters in England.

PROFILE:
SYMMES MAINI & MCKEE ASSOCIATES

Symmes Maini & McKee Associates (SMMA) is a multidisciplinary architectural, engineering, planning, and interior design firm, offering professional services to corporate/commercial, advanced technology/industrial, and institutional clients. Founded in 1955, the firm is headquartered in Cambridge, Massachusetts with a regional office in Minneapolis, minnesota; 207 employees are the strength of the company.

"Embracing technology has kept SMMA ahead of the curve and continues to be a key to the firm's effort to attract and retain design talent," says president/CEO Mike Powers. Computer-based design, analysis, and communication tools are provided to every desktop–facilitating the sharing of information, enhancing design creativity and productivity, and ensuring reliable information storage, retrieval, and publication.

Team members from all the disciplines work together to develop tailored, coordinated, and appropriate solutions to the complex challenges of each client's program. This collaborative approach is the keystone in SMMA's ability to support the quality, schedule, and financial goals of each client. Those clients include IBM, Analog Devices, Nortel Networks, Nokia, Teradyne, Hewlett Packard, Compaq Computer, Astra pharmaceutical, MIT, Brown University, Radcliffe College, Tufts, and Boston University. Mike Powers, 617-520-9204 tel, m_powers@smma.com

PROFILE:
URS CORPORATION

Headquartered in San Francisco, URS serves its worldwide clientele from 300 offices in 38 countries. URS is one of the world's largest architectural, engineering and construction management companies, with a staff of 16,000 architects, engineers, planners, scientists and program and construction managers.

An equal opportunity employer, the firm prides itself on offering a chance for people to apply their talents to some of the world's largest and most challenging projects. URS places great importance on providing the tools, incentives and opportunities to help employees do the best work of their lives.

URS currently has job opportunities worldwide. Because of its broad diversity of projects, the positions available range from entry-level positions









Building Careers. Designing Success.

Take a look at the URS Corporation balance sheet and you'll see that we're one of the largest architectural/engineering firms in the United States. But our most important asset doesn't appear anywhere in our financial statements. At URS, our employees are our most valuable resource: over 16,000 professionals located in 300 principal offices worldwide. Our architects, engineers, planners, designers and construction specialists provide the professional services necessary to help our diverse, global clientele meet their objectives. URS Corporation is seeking project managers, project architects and designers with experience in health care, correctional, aviation, corporate or educational facilities.



Submit your resume with salary requirements and preferred location in confidence to recruiter@urscorp.com. Or telephone Jeff Urbanski, Regional Recruiter at 1.800.860.4500 facsimile 614.621.5070.

URS

100 California Street, Suite 500, San Francisco, CA 94111-4529
Telephone 415.774.2700 Facsimile 415.398.1905 www.urscorp.com

URS Corporation (NYSE:URS) is an Equal Opportunity and Affirmative Action Employer. Minorities and women are encouraged to apply.

to senior technical or management positions. Job opportunities include positions for architects/ designers; urban planners; civil, transportation, electrical, mechanical, environmental, seismic and civil-geotechnical engineers; landscape architects; CADD technicians/designers; construction managers; and environmental planners.

PROFILE

TSOI/KOBUS & ASSOCIATES

Tsoi/Kobus & Associates (TK&A), an architecture, interior design, and planning firm in Cambridge, Massachusetts, was founded in 1983 by Edward Tsoi and Richard Kobus. Since that time, the firm has grown to 100 people and demonstrated unwavering commitment to providing excellence in design; providing the highest level of comprehensive, professional services to clients; and creating a stimulating and challenging environment for its employees.

The firm is currently looking for project managers, senior construction administrators, designer/ architects, technical architects, interior designers, and more. A position at TK&A means the chance to work with clients such as Lucent Technologies, MediaOne, Monsanto Company, Boston Properties, Beth Israel Hospital, The Children's Hospital, Harvard University, Washington University, Williams College, and Massachusetts Port Authority.

Richard White, a specifications consultant who has worked with the firm, says "something unusual is going on at TK&A. They have an unusually low rate of turnover. The staff is loyal and happy. This is wonderful for clients, because it means they're getting an experienced, smoothly functioning team that doesn't have to reinvent the wheel with every job." Cheryl Egan, 617-588-8565 tel, 617-588-8365 fax. cegan@tka-architects.com

MARKETING MANAGER

Major Architectural/Engineering/Interior Design firm in South Florida is seeking an experienced Marketing Manager for its Coral Gables office.

- Management of marketing resources, processes and activities.
- Coaching of Market Sector Leaders and others involved in Business Development.
- Selection, training and development of marketing resource staff.
- Management and coordination of the firm's image development and positioning process and activities.
- Coaching of Market Sector Leaders and others involved in business development.
- Overall management and coordination of support process and activities for the Firm's business development efforts including data base development, research, proposal generation & photography.
- Editing & writing skills required.
- Degree in Marketing and Architecture/ Engineering background is preferred.

Spillis Candela DMJM
Attention: Don Tyson
(305)447-3578
No Telephone inquiries please.
EOE/AA Employer, M/F/V/H
Non-Smoking Workplace, DFWP

CORNELL UNIVERSITY
Department of Architecture

ASSISTANT OR ASSOCIATE PROFESSOR OF ARCHITECTURAL TECHNOLOGY

The Department of Architecture at Cornell University invites applications for a tenure-track position in architectural technology (environmental controls). Candidates must be able to teach in the following areas: lighting, acoustics, passive solar, and mechanical systems. In addition to teaching required undergraduate courses in the areas listed above, the position requires developing and teaching advanced elective courses in related areas; serving on undergraduate and graduate thesis committees; participating in design studio reviews; research/scholarly work; and administrative committee responsibilities. Candidates will be evaluated according to the following criteria: previous teaching experience, professional and/or advanced degrees at the graduate level, professional experience in the areas listed above, and research/scholarly work. Screening of applications will begin November 15, 2000 and will continue until the position is filled. The appointment is expected to begin Fall 2001. Submit letter of application including a brief statement outlining your teaching and research/ scholarship objectives, a curriculum vitae, and contact data for three references to: Architectural Technology Search Committee, Department of Architecture 143 East Sibley Hall, Cornell University, Ithaca, NY 14853-6701.

SYRACUSE UNIVERSITY
School of Architecture
Positions in Architectural Design

The Syracuse University School of Architecture is conducting a search for full-time, tenure-track positions at the rank of Assistant Professor beginning fall, 2001. Applicants must demonstrate an interest in teaching architecture and in pursuing intellectual goals through scholarship and creative work.

The School of Architecture offers both B. Arch. undergraduate and M. Arch. professional degrees as well as post-professional M. Arch. degree programs. Faculty of the School of Architecture teach in Syracuse, New York, as well as in the Florence Program in Italy.

Applicants with expertise in non-digital representation techniques (e.g. freehand drawing; perspective construction; descriptive geometry; and physical modeling) and/or digital representation techniques (e.g. drawing; image manipulation; modeling; and animation) are especially encouraged to apply. Teaching responsibilities are at both undergraduate and graduate levels, and include design studios and an additional course. Design faculty also serve on design thesis committees.

Applicants must have completed a first professional degree in architecture, with professional experience and registration preferred. Salary is negotiable and will be commensurate with experience.

Applicants should submit a curriculum vitae; a statement of professional, pedagogical, and research interests and goals; samples of creative work, teaching materials and student work as appropriate; and the names of at least three references. Submissions are due by Friday, December 29, 2000, and should be sent to:

Chair, Faculty Search Committee
School of Architecture
Syracuse University
103 Slocum Hall
Syracuse, NY 13244-1250

Syracuse University is an Equal Opportunity/Affirmative Action Employer. Applicants may visit the school's website at http://mirror.syr.edu/soa.html

designwalk.com

THE FUTURE OF ONLINE DESIGN RECRUITMENT

POST A JOB | FIND CANDIDATES | FIND A JOB | ADVERTISE
POST RESUME | FREELANCERS | STUDENTS | COMMUNITY

The University of Texas at Austin
Dean of the School of Architecture

The University of Texas at Austin seeks a qualified individual to lead the School of Architecture as its Dean, beginning August 30, 2001. Nominations and letters of application, accompanied by a curriculum vitae, the names of three references, and other supporting materials should be mailed to: Dr. Steven P. Nichols, Chairman, Consultative Committee for the Selection of the Dean, School of Architecture, Goldsmith Hall 2.308, The University of Texas at Austin, Austin, Texas 78712-1160. The University of Texas at Austin is an Affirmative Action/Equal Opportunity Employer. Please see the following web site: www.ar.utexas.edu/Dean_Search.

Work with a great Architect!

The Hillier Group
designing solutions

Hillier

Architecture
Interior Design
Planning
Historic Preservation
Landscape Architecture
Graphic Design

Princeton
New York
Newark
Philadelphia
Washington
Scranton
Kansas City
Dallas
London

1.888.hillier careers@hillier.com www.hillier.com

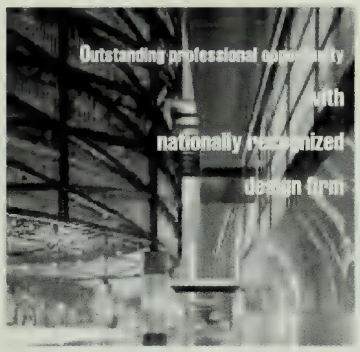
Synthetic Gypsum Wallboard

See what it can do for the environment...

& your next project

www.temple.com/green

Temple™
A Temple-Inland Company



We are seeking individuals with a minimum of 3 years of experience and AutoCAD proficiency for positions in our Los Angeles, Seattle, Portland, and Washington DC offices. Our practice is focused on a diverse range of project types from large research laboratories and healthcare facilities, to academic buildings, commercial offices and museums. All positions offer competitive salary, benefits and profit sharing. A great chance to collaborate with talented professionals in an environment committed to design excellence.

Visit our website at www.zgf.com
Fax or email resume to Zimmer Gunsul Frasca
Fax 213.617.0047; jkelly@zgf.com
333 South Grand Avenue, Suite 3600
Los Angeles, CA 90071

UNIVERSITY OF VIRGINIA
SCHOOL OF ARCHITECTURE

The University of Virginia is seeking applications for tenure-track and visiting faculty positions for the 2001-02 academic year.

Associate Professor in Practice
Successful candidates for these visiting positions will have innovative professional work and an emerging national reputation for design excellence. These newly created positions are structured to allow practicing designers to teach full time at the graduate level one semester per year for a period of 2–4 years.

Architectural Design & the Natural Environment
Successful candidates for this position will have a broad understanding of sustainable design concerns together with the ability to teach studios and/or lecture courses involving the integration of environmental systems and design with climate. Candidates should have demonstrated in their creative work an interest in innovative approaches towards issues of thermal, luminous and/or acoustic design. This appointment will be at the Assistant or Associate Professor level, depending on the qualifications of the candidate.

Architectural Design
Successful candidates for this position will have demonstrated excellence in teaching or architectural practice with computer related design methods. The position will involve design studio instruction as well as related course offerings in design visualization, theory or methods, or building systems. This appointment will be at the Assistant or Associate Professor level, depending on the qualifications of the candidate.

Candidates for these positions should have professional and/or research degrees in architecture or a related field. Evidence of a clear agenda in a candidate's creative work and/or research is essential. Substantial teaching experience is desirable. Please submit a letter of interest, curriculum vitae, and names of three references (include phone and email address). Materials will be reviewed beginning January 15. The review will continue until the positions are filled. Applications should be sent to: Faculty Search Committee, Department of Architecture, University of Virginia, School of Architecture, Campbell Hall, P.O. Box 400122, Charlottesville, VA 22904-4122. Women and minorities are encouraged to apply. The University of Virginia is an equal opportunity/affirmative action employer.

POSITIONS VACANT

ARCHITECTS

Gordon H. Chong & Partners has a variety of openings in its San Francisco office. We're an emergent architecture and planning firm with specialties in education, healthcare, transportation, commerce and culture. Our community focus and collaborative ethic make us a forward-thinking practice with much to offer both our clients and our employees. We are constantly looking for talented and innovative architects at all level. Please visit our website, www.ghcp.com, to learn more about us and review our list of open positions.

ARCHITECTURAL DRAFTSMAN

Architectural Draftsman wanted in Mahopac/New York to prepare detail drawings of architectural designs and plans for buildings according to specifications, sketches and drafts provided by architects and engineers. Associates degree in drafting req. 2yrs. exp. Send resume to Rayex Design Group, Inc., 266 Shear Hill Road, Mahopac, New York 10541 Att. WB

INTERIOR DESIGNERS/ARCHITECTURE FURNITURE DEALERSHIPS

American Personnel specializes in corporate designers and furniture specialists, established since 1969, are in constant search for prospective employees, to fill our various job opportunities with our national clients. Project Managers / Ast. Project Mgrs / Sales Associates / Sales Asts. / AutoCAD Operators / Administrative Support / Entry-level Designers. Clients are based out of New York City, New Jersey, and other locations. For more details on our services, please feel free to call Frank Cassisa - Executive V.P., Ph: 212-233-2900, Fax: 212-233-3043 or after 7pm at 732-360-0655.

ASSISTANT/ASSOCIATE DIRECTOR AND DAYTON HUDSON ENDOWED CHAIR II IN URBAN DESIGN DESIGN CENTER FOR AMERICAN URBAN LANDSCAPE UNIVERSITY OF MINNESOTA

The Design Center for American Urban Landscape (DCAUL), University of Minnesota, seeks applications for position of Dayton Hudson Chair II and assistant/associate director. Appointment holds title of assistant or associate professor. Appointment begins August 27, 2001. Assistant/ associate director position is academic administrative, 12-month, 100%-time, five-year renewable contract. Associate/assistant professor position is 9-month, tenured or tenure-track faculty appointment. Responsibilities: managing projects, arranging contracts, fundraising, grant development, staff hiring, and implementing certificate program. Essential qualifications: professional graduate degree in architecture or landscape architecture, degree or experience in urban design, and ability to interact effectively with a diverse group of people. Information about DCAUL and full position description are available online: www.cala.umn.edu/design_center/dcaul.html Position is open until filled. Application screening will begin on December 16, 2000. Send letter of interest, CV, portfolio of design projects and/or samples of written work, and names of three references to: Jennifer Downes, Design Center for American Urban Landscape, Suite 222, 1313 Fifth Street S.E., Minneapolis, MN 55414-1546 The University of Minnesota is an equal opportunity educator and employer.

ARCHITECTURE

Project Manager sought by NYC arch. & design firm. Responsible for overseeing hi-end retail & office interiors projects. Bachelor of architecture & 2 years min. exp. as project manager/job captain w/interiors-oriented firm. 2yrs. min. exp. in CAD. Fax cover letter & resume to Lalire March Architects (212) 366.9595.

PROJECT MANGER

HPA, Inc., located in Newport Beach, CA, is looking for a F/T Project Manager for an architectural firm to: Plan, direct, and coordinate activities of projects to ensure goals are met. Review project proposals/plans to determine time frame, funding limitations, staffing requirements, etc. Direct activities of drafters & spec. writers. Consult with clients regarding functional and spatial requirements. CAD & 3-D rendering. Master's in Architecture req'd. Fax resume attn: HR (949) 261-5377.

ARCHITECT, PROJECT

Plan, direct, & coordinate activities of designated project to ensure projects are accomplished within prescribed time frame. Confer with project staff to outline work plan & to assign duties & responsibilities. Responsible for architectural presentation drawings, conceptual designs, architectural & interior design concepts. Prepare construction documents, bid documents, & proposals. Prepare quantity take-offs & estimates. Responsible for approval of plans & plan check corrections from the city building, planning permit section. Coordinate drawings between consultants, site architect doing coordination & field inspection. Check shop drawings, issue R.F.'s bulletins & review request for change orders. $30.53/hr, 40 hr/wk. OT@1.5. 8:30am-5:30pm. B.S. in Architecture & 2 yrs in the job, or 2 yrs as a Senior Draftsman required. Refers & verif of work history required. Job site intvw: Paramount, CA. Send this ad and your resume/letter of qualifications to Job #CCR 19955, P.O. Box 269065, Sacramento, CA 95826-9065.

ARCHITECTS – $40,000-$135,000

Key positions nationwide with leading A/E Regional and National firms. Management, design, staff and marketing positions. Highly Confidential! No fee! Group One Search, 639 N. 7th Str., Grand Junction, CO 81501. Tel: (970) 241-2499, fax (970) 241-2504, e-mail: grouponesearch@aol.com. Visit our website at www.grouponesearch.com today!

COLORADO

You know you want to.
The AIA Colorado Job Board. www.aiacolorado.org

PRINCIPAL - VICE PRESIDENT OF PROJECTS DAVID OWEN TRYBA ARCHITECTS DENVER, COLORADO

David Owen Tryba Architects (DOTA), an exciting, high-design, high-energy world-class architectural firm, is seeking an exceptional manager to serve as its Vice President of Projects. Located in Denver, Colorado, DOTA is one of the premier firms in Denver, and was recently awarded in international competition the new $125 million Denver City & County Building project. VPP Responsibilities include: Guiding high quality projects from proposal to completion; staffing of and budgeting for projects; developing long term relationships with clients, contractors and engineers; and working directly with the president and CFO to guide this rapidly growing 45 person firm. Requirements include: 20+ years experience as an architect with at least 10 years of project management experience with a staff of 65+ employees; must also be a high energy, dynamic individual who has a passion for and is committed to superior, world-class architecture; have excellent communication skills, a strong ability to create and maintain lasting client relationships, and have a track record of completing projects on time, within budget and with exceptional quality. Strong executive presence & an exceptional ability to motivate project managers, architects & clients is a must. DOTA offers a very competitive compensation package and a work environment based at the foothills of the Rocky Mountains. If you are our person, we want to hear from you. Send your resume in confidence to our consultants: Beale International, 1571 Race Street, VP368AR, Denver, Colorado 80206; fax (303) 377-9766; e-mail: bealeinc@aol.com

BUILD YOUR CAREER

Wonderful opportunities exist at TLCD Architecture, a longstanding, and service oriented No. CA firm, in the heart of the wine country. We serve our clients and community to the best of our professional ability with integrity, humor and personality. We encourage a responsive, humanitarian approach to design that reflects the highest and best use of the resources available. We continue to evolve our organization and capabilities in ways that embrace new ideas and technologies. We foster a supportive, stimulating and dynamic environment that promotes creativity and provides opportunities for personal and professional growth to grow professionally & contribute to this rapidly expanding team. Super benefits & respectful/supportive work env. Santa Rosa Location: *Healthcare Architect needed to grow this division. Must be CA licensed, exp'd w/OSHPD & state regulatory agencies & knowledgeable in AutoCAD & healthcare bldg. codes. *Project Architect needed to manage own projects w/strong comm. skills. CA licensed, institutional & educational exp. a+. Fairfield Location: *Project Architect needed to manage entirety of own projects. Great interpersonal skills nec. to interact with clients & team. CA licensed, educational facilities exp. a+. Res: The Personnel Perspective. FAX: (707) 576-8190. Email: resumes@personnelperspective.com

ARCHITECTURAL DESIGNER

Provides professional services in research, development, design, construction, alteration or repair of real property, such as private residence, office buildings, educational centers, under the supervision of an architect licensed by the State. Consults with clients to determine functional and spatial requirements and prepares information regarding design specifications, materials, equipment, estimated cost and building time. 2 years exp. req. B.S. Architecture req. $32.26/hr. Job site intvws: Agoura Hills, CA. Send ad & resume to the attn: Mohammed Esa, 5871 Larboard Lane, Agoura Hills, CA. 91301. Must show legal right to work in the U.S. if hired.

INTERIOR ARCHITECTURE

Applications & nominations are invited for a full-time faculty (associate professor) & administrative position available Spring Semester 2001. Candidates must hold appropriate terminal degree (M.Arch, MFA, or Ph.D.), have design studio teaching experience & minimum of 3 years recent professional experience. Expected to provide leadership to maintain momentum of award-winning department. Send resume, letter of interest addressing your vision of design & education, & 3 reference letters to: HR Office, Woodbury University, 7500 Glenoaks Boulevard, Burbank, CA 91510-7846. EEO/AA

ARCHITECTS AND INTERNS

Nationally recognized 36-person architectural design practice is seeking intelligent people with exceptional design prowess to contribute to our 39-year tradition of excellence. We generate award-winning architecture through a studio environment that encourages critical discussion and the testing of alternatives. Visit our website at www.hlkb.com. Qualified candidates should send or e-mail their resume to: Julie Severson, Herbert Lewis Kruse Blunck Architecture, 218 6th Avenue, Suite 202, Des Moines, IA 50309 USA, jseverson@hlkb.com

SENIOR PROJECT DESIGNER

Responsible for design of arch. projects, utilize 3D Studio, AutoCAD 2000, PowerPoint. Create bldg. models and/or 3D graphics; prepare design competition entries. Min. 4 yrs. exp. Competitive salary. Mail resume to Timothy R. Baker, AIA, 601 S. Lake Destiny Rd., #405, Maitland, FL 32751. No phone calls please.

ARCHITECTURAL DESIGNER

F/T; Research, plan, design remodel of commercial & residential buildings using CAD software; MA in Architecture + 2 yrs exp; $30.66/hr; Job & interv. at L.A. CA. Send ad & resume to JOB#IAR54532, P.O. Box 269065, Sacramento, CA 95826-9065.

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

ARCHITECTS - ALL LEVELS/ALL SPECIALTIES
JR Walters Resources, Inc. specializing in the placement of technical professionals in the A&E field. Openings nation wide. Address: P.O. Box 51214, Kalamazoo, MI 49005 Tel: (616) 381-5463 Fax: (616) 381-1141

ARCHITECTS NEEDED!
Senior Level Architects, are you interested in a career change or are you searching for better opportunities? Executive search and recruiting firm with 25+ years of experience in the architectural and engineering industry serving the nation's leading A/E firms. Please submit your resume to: CSS Search and Recruiting, Inc. c/o Heidi Lomprey, 115 5th Ave. S., Suite 501, La Crosse, WI 54601. Fax: 608-784-4904. Telephone: 608-784-4711. Email: css@csssearch.com. For a current list of our job openings, log on to our web site at www.csssearch.com

CSUB NO. 673 – DIR. OF PHYSICAL PLANNING DESIGN & CONSTRUCTION MGT (ADM. II)
Seeking exp. indiv. offering leadership in wide range of physical planning, design & constr. functions. Req. BA/BS degree in architecture, const. mgt., busin. adm. or equivalent and min. of 5 yrs. exp. in const./fac./proj. mgt. or rel. field. Must be fam. w/MS Office and have gen. knowl. of proj. & const. schedul. software. Knowl. of CADD highly desirable. Knowl. of higher ed. proc. & prac. preferred. Official CSUB app. forms avail. from website & must be compl. in full & recd. in the Personnel Office. Resumes are not accepted in lieu of app. E-mail apps. not accepted. Must incl. a copy of college deg. w/names of 3 prof. refs. Faxes ok. Salary: DOE. Filing deadline: 9/22/00 or until filled. Apply to: Office of Personnel Services, 9001 Stockdale Hwy., Bakersfield, CA 93311-1099. Use PSN# to id. AA/EOE. www/csub.edu/admin/personnel/jobs.htx

FACULTY POSITIONS

DEPARTMENT OF ARCHITECTURE UNIVERSITY OF WASHINGTON, SEATTLE
Seeks tenure track, Asst Prof, full-time, 9-mo. Appoint. Begin fall 2001. Able to teach design, history, theory &/or preservation & large history lectures including antiquity to 1750s. For complete ad see: http://depts.washington.edu/archdept/ or email vprakash@u.washington.edu

ASSISTANT PROFESSOR-LEHIGH UNIVERSITY
Tenure-track position in Department of Art and Architecture available Fall Semester (August) 2001. Candidates are sought who specialize in foundation studio, are computer literate in the visual and/or building arts and capable of employing that literacy in the studio teaching environment (in industrial design, graphic design, or architectural design). The Department offers pre-professional undergraduate programs in art, architecture and design. Responsibilities: Teaching two-semester foundation (basic) design sequence which includes one course in 2-D design, and one course in 3-D design and additional studio courses in art, architecture, or design. The successful candidate will integrate computer-based instruction into studios. Qualifications: Terminal degree in art (MFA), architecture (B.Arch, M.Arch or Ph.D.) or Design (M.Design). Visit our website at: www2.lehigh.edu/page.asp?page=casdeptart. Inquiries, curriculum vitae, letter of application and names and telephone numbers of three references should be sent to Professor Bruce Thomas, Department of Art and Architecture, 17 Memorial Drive, East, Lehigh University, Bethlehem, PA 18015.

www.architecturalrecord.com

MICHAEL LATAS & ASSOCIATES

Executive search and professional recruiting services. Serving the construction industry exclusively nationally and internationally since 1975.

Your premier source for executive, managerial, and difficult-to-fill professional-level needs.
Contact our Architecture/Engineering Division.

MICHAEL LATAS & ASSOCIATES
1311 Lindbergh Plaza Center
St. Louis, MO 63132

(314) 993-6500 • Fax: (314) 993-0632
(800) 280-7811 • http://www.Latas.com

ARCHITECTURAL DESIGN POSITION PRINCETON UNIVERSITY
The School of Architecture at Princeton University is seeking candidates for a full-time, tenure-track, faculty position to teach in the area of architectural design at the undergraduate (A.B.) and graduate (M.Arch.) levels. Candidates must demonstrate excellence in architectural design, an established record in teaching, and the ability to carry out scholarship or research in their design practice. They must also be capable of offering courses in one of the following areas of knowledge: history and theory; architectural analysis and representation; computing and imaging; or, building science. Teaching responsibilities include participation in all of the School's undergraduate and graduate programs. The position will begin in the fall term of 2001. A letter of interest and curriculum vitae, along with a non-returnable portfolio of design work, should be sent before November 15, 2000 to: Faculty Search Committee, Design Position, Princeton University, School of Architecture, Princeton, NJ 08544. Princeton University is an Equal Opportunity/Affirmative Action Employer.

HISTORY/THEORY POSITION PRINCETON UNIVERSITY
The School of Architecture at Princeton University invites applications for a full-time faculty position in the area of the history and theory of architecture. Candidates will be considered for appointment at either a tenure-track or tenured rank. Candidates must demonstrate their scholarly contributions and standing in the field, and their qualifications to teach and advise both undergraduate (A.B.) and graduate (M.Arch. and Ph.D.) students. In particular, candidates must demonstrate their qualifications to act as an adviser to Ph.D. students working on topics related to their area of scholarship. An established record of teaching lecture and seminar courses, including the history and theory of twentieth century architecture, is required. It is expected that the successful candidate will also actively participate in the design curriculum through design reviews, at the undergraduate and graduate levels, beyond their normal course offerings. The position will begin in the fall term of 2001. A letter of interest and complete curriculum vitae (including references) should be sent before November 15, 2000 to: Faculty Search Committee, History/Theory Position, Princeton University, School of Architecture, Princeton, NJ 08544. Princeton University is an Equal Opportunity/Affirmative Action Employer.

TO ADVERTISE

Contact Ally Wingate at
T: (800) 484-4042 ext. 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

COMPUTER SERVICES

Power, Functionality & Attention to Detail

FLATLAND



...Abundant 2D Tools; Easy to Learn and Use...
...Powerful and Useful...
Cadalyst Magazine, October 1996

Call (800) 247-2032 for Free Working Demo

FLATLAND 6... Serious Two Dimensional Drafting for Building Design Professionals

Ashcraft Architectural Computer Graphics
220 [illegible] Street, Glens Falls, NY 12801 (518) 798-4631 (800) 247-2032

Circle 190 on Inquiry Card



STREET CLOCKS
The Ultimate Landmark
$15,000.00
While They Last!
$2,995.00
309-794-3022

COMPLETE PREPARATION FOR THE REGISTRATION EXAM

Architectural License Seminars
Web: www.alsOnline.com **Tel:** (310) 208-7112
E-mail: alsOnline@earthlink.net **Fax:** (310) 824-7028

SPECIAL SERVICES

GreenwayConsulting (800) 726-8603
www.GreenwayConsulting.com
Premier Research, Consulting and Publishing for A/E/C Entrepreneurs

strategic planning • surveys & research • executive searches
market analysis • succession planning • meeting facilitation
belief in a "better way" to achieve business and personal success
Washington, D.C. • Atlanta, GA • Chicago, IL • Since 1982

RENDERINGS

ARCHITECTURAL RENDERINGS
Fortune 500 clientele, Watercolor: 11" x 17" $1,499 + tax, 3 days. 12" x 22", $2,899 + tax, 5 days. Visa, MC, AmEx. Mayron Renderings, (212) 633-1503 or (800) 537-9256. Visit www.mayronrend.com

ARCHITECTURAL RECORD: (ISSN 0003-858X)Vol. 188, No. 11. Published monthly by The McGraw-Hill Companies, 1221 Avenue of the Americas, New York, N.Y. Periodicals postage paid at New York, N.Y. and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 246565. Registered for GST as The McGraw-Hill Companies. GST No. R123075673. **POSTMASTER:** *Please send address changes to* ARCHITECTURAL RECORD. Fulfillment Manager, P.O. Box 566, Hightstown, N.J. 08520. **SUBSCRIPTION:** Rates: U.S. and Possessions $59; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $8; for foreign $10.



Mariko Mori: Tour guide to a technological temple of dreams

Interviewed by Ingrid Whitehead & Clifford Pearson

In her art, Tokyo-born multimedia artist Mariko Mori creates imagery where spiritual and physical realms play upon each other in a dance of past and present, nature and artifice, technology and tradition. Often incorporating herself in her work, Mori has found ways to comment on the individual's place within the landscape of a greater society, using such media as photography, 3-D video, performance art, and lately, architecture. Her work is shown in museums and galleries worldwide. Mori's latest work, Dream Temple, *is an intricately modern reconception of the ancient (739 A.D.) Yumedono temple in Japan. Incorporating light, sound, and 3-D video projection, Mori's* Dream Temple *takes visitors on a four-minute-44-second experience that she hopes will lead visitors further inside their minds.* Record *spoke with Mori from her New York City studio.*

Q: *How has architecture, and the built environment, influenced your latest work?* I was very much affected by the original dream temple, the Yumedono of Horyuij. It was a place that had a life of eternal present, where Prince Shotoku would go to meditate or study, a place where he could transcend time and space. I wanted to create a place like this, using the traditional octagonal shape, the eight steps, but update it by using modern materials, such as iridescent, dichroic glass, and technology to make it an environment that people could experience virtually as well as three-dimensionally. A place where you can use all five, maybe six, senses. It's a utopian space from an ancient concept. A place where, for four minutes and 44 seconds, one person can experience another kind of reality. Also, modern technology and ancient spiritual values are fused here.

What should people take from this experience? You are born alone and die alone, yet you are surrounded by people all the time. At this moment in the world it's very important for people to get in touch with themselves; with their consciousness. *Dream Temple* is a place where that can happen.

Which architects or artists have influenced you? For me it's not contemporary architects or artists who influence me as much as ancient ones. I have been inspired by the work of [18th-century French architect] Claude Ledoux. The idea of perfection is a concept he used, and one that I am very drawn to. I do find some artwork from the '70s earthwork to be very interesting.

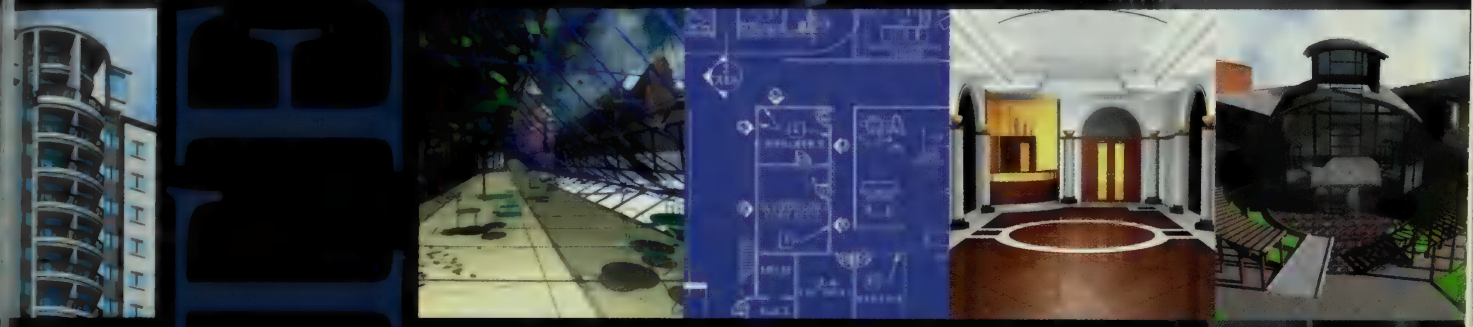
You live and work both in Tokyo and New York City. Where do you feel the most at home? I like to think that wherever I am in the world, I am home. ■

Photo by Rowland Kirishima © Mariko Mori

www.vectorworksarchitect.com
1-888-646-4223

VectorWorks ARCHITECT

Delivers the promise of Architectural CAD



"VectorWorks ARCHITECT is a great program. I am currently getting re-trained in AutoCAD Architectural Desktop Revision 2...and it just doesn't stack up to VectorWorks ARCHITECT."
—Edward Koenig, Carmelhill Drafting Studio

Isn't it about time someone addressed the promise of CAD?
Introducing VectorWorks ARCHITECT

Engineered and built by professionals in your discipline, ARCHITECT delivers on the promise of architectural CAD. It does everything CAD was supposed to do but didn't quite. Truly a better way to design, ARCHITECT integrates Design, Production and Project Management into a system that delivers unparalleled productivity—all at a price even the smallest firm can afford.

INTEGRATION

- Complete integration of your 2D plans, 3D models, reports, schedules & client presentations
- Scalable CAD standards make it easy to structure & manage documents

DESIGN

- Unprecedented tools for programming studies and analysis
- Thousands of "Intelligent" building Objects & 2D/3D architectural symbols
- State of the art Solar Animator

PRODUCTIVITY

- An easy system for archiving, placing, & managing notes
- Automatic creation of reports & schedules
- Project Management features including issue management, error & revision control, & workgroup referencing



Special Offer to Readers of *ARCHITECTURAL RECORD*

Save over $180 by purchasing VectorWorks ARCHITECT direct for $1395 or without photorealistic rendering for $1140. Includes FREE Tech Support and a 90-Day Money-Back Guarantee.
*Existing VectorWorks users call for upgrade pricing.

NEMETSCHEK
NORTH AMERICA

CIRCLE 93 ON INQUIRY CARD

Kroin

Kroin Incorporated
100 Rindge Street
Cambridge, Massachusetts 02138

Telephone 800 OK KROIN
Telefax 617 492-4001

Blow away the competition.
Kroin sanitary fittings and polished stainless steel basins are hot!

Design: Professor Arne Jacobsen, MAA
Selected for the Design Collection, MoMA.

For information Circle 100.



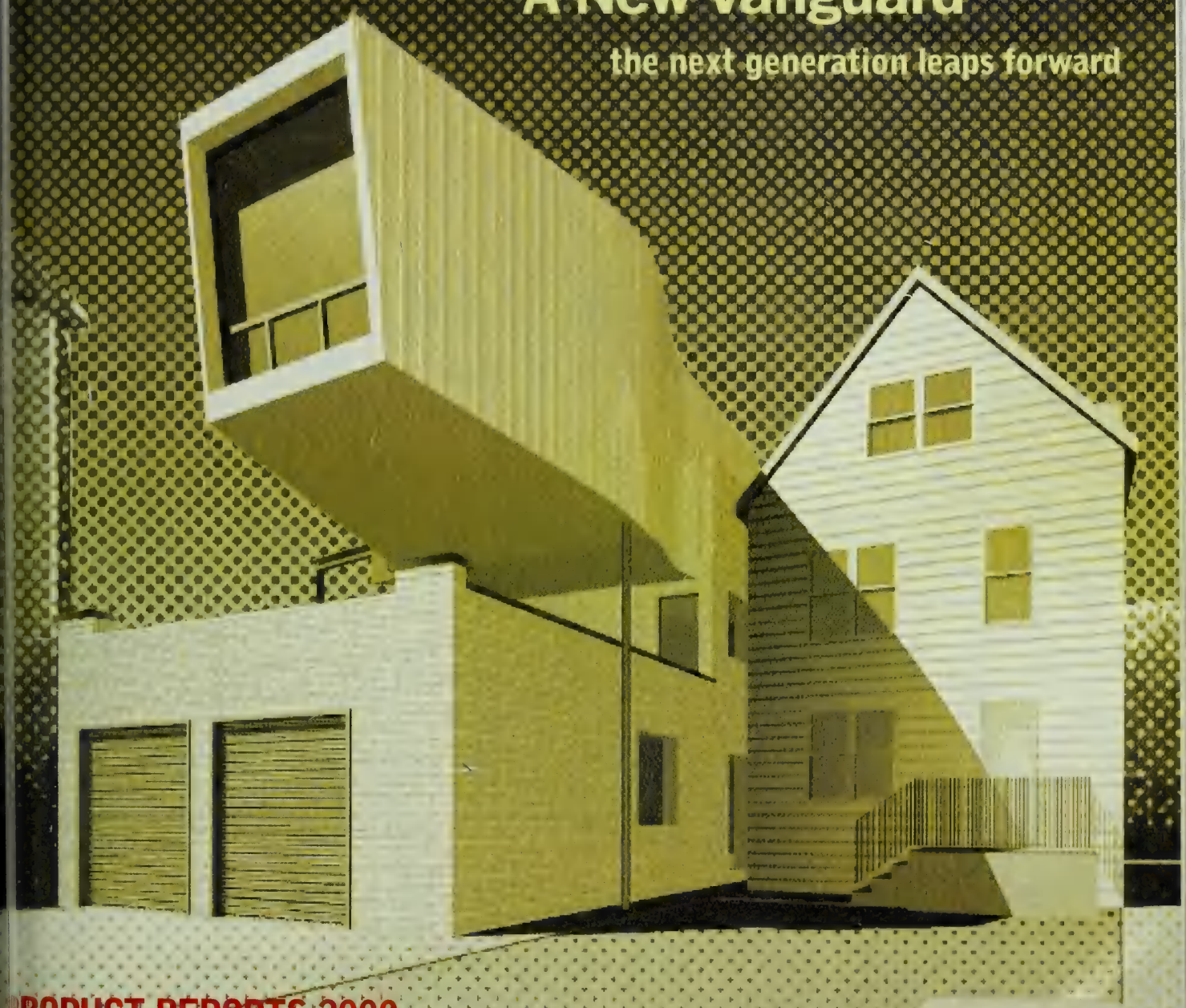
ectural Record
December

ITECTURAL RECORD

BURLINGAME PUBLIC LIBRARY
3 9042 05166401 6

A New Vanguard

the next generation leaps forward



PRODUCT REPORTS 2000

30 Pages of this Year's Best New Products

plus:

The Digital Practice Section

BURLINGAME
DEC 19 2000
LIBRARY


Spot the two terms
that don't go together:
1. Suspended Ceiling
2. Grid-hiding Visual
Until now.



CEILING SYSTEMS

[Between us, ideas become reality.™]



Introducing Optima Vector™, the revolutionary new acoustical ceiling with virtually no visible grid.

With Optima Vector, now you can achieve a clean, nearly monolithic look in a downward access suspended ceiling. That's because the unique Vector* edge detail provides a sleek ¼" reveal that minimizes the existing grid. In fact, the larger the expanse of open plan ceiling, the more effectively the grid disappears, leaving you with a grid-hiding, upscale visual. It works with existing standard 15/16" grid systems, which makes it perfect for renovations – avoiding costly, time-consuming grid removal, replacement or repainting. And because Optima Vector is a high performance open plan ceiling, you can count on superior sound absorption, light reflectance and durability.

Suspended ceiling. Grid-hiding visual. Now together, from Armstrong.

For more information, call 1-888-CEILINGS or visit our website at www.ceilings.com

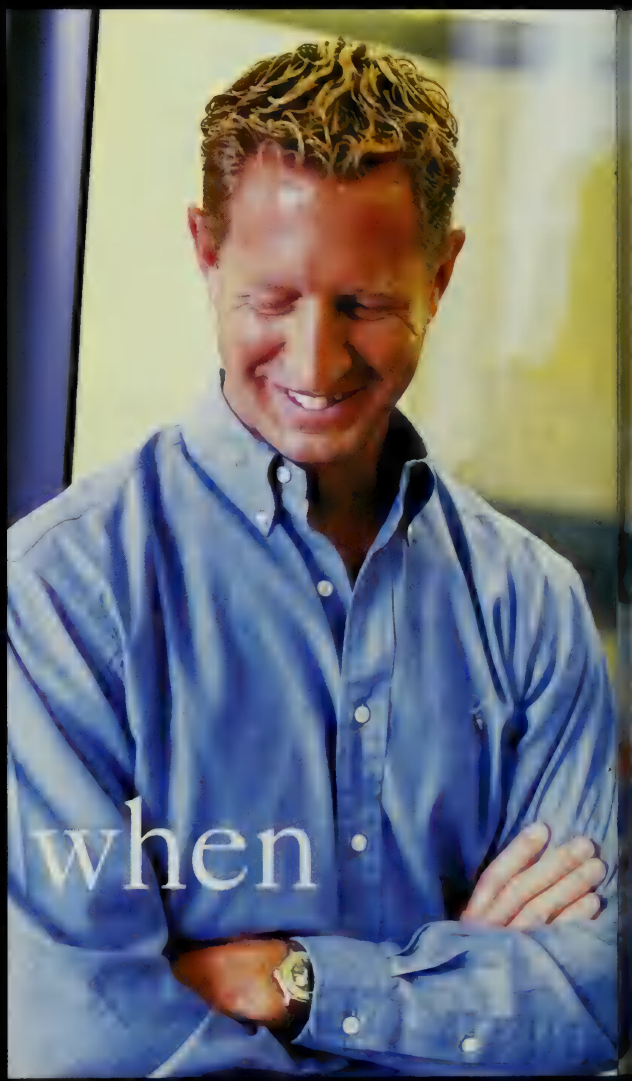
*Patent Pending

Armstrong

CIRCLE 1 ON INQUIRY CARD

The harmonious integration of architecture, furniture and technology

pathways@work



"I succeed when people take their work environment for granted."

Steve Silverstein
Director – Real Estate, Facilities and Administration, Deloitte & Touche



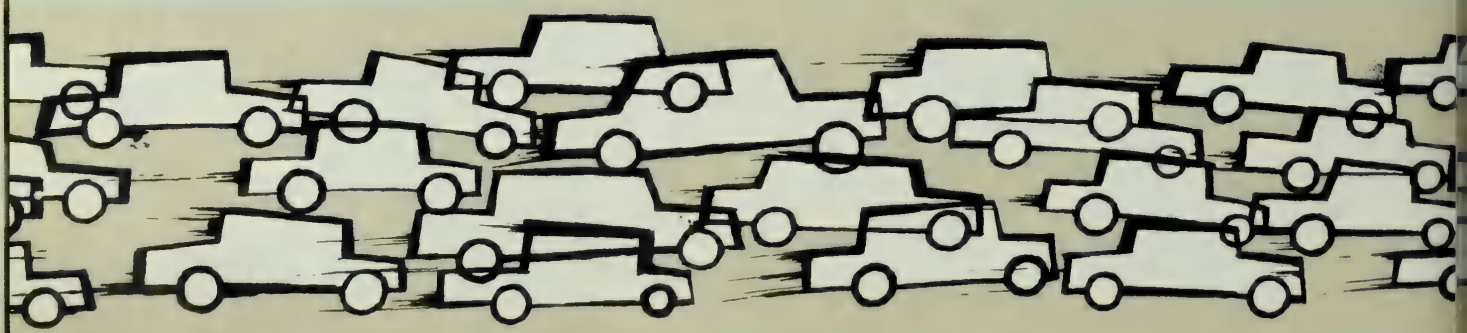
For Steve and his team, the ideal work environment meets your needs so readily that you don't even notice it. They achieved it when they created "SmartSpace." Thanks in no small part to Pathways®. The Pathways portfolio of products enabled them to create an environment that provides exceptional support by integrating architecture, furniture and technology. Just as important, given the pace at Deloitte & Touche, it let them create an environment they can reconfigure at the drop of a hat.

Why is Steve smiling?
See for yourself at
www.steelcase.com

CIRCLE 2 ON INQUIRY CARD

Steelcase®

Going our way?



It's time to take cars in a new direction. Along a cleaner, more open road that travels the outskirts of convention. That's why we've created the Toyota Hybrid System, the power inside our breakthrough gas/electric vehicle, the Prius. Toyota is the first company to mass-produce a hybrid vehicle, and we're working to develop even more advanced technologies down the road. Fasten your seatbelts. It's going to be an exciting ride.

www.toyota.com/ecologic 800-GO-TOYOTA ©2000

TODAY TOMORROW **TOYOTA**

CIRCLE 3 ON INQUIRY CARD

ARCHITECTURAL
RECORD

12.2000



News

33 Koolhaas' Vegas Guggenheim

34 D.C. Metro canopies

36 Meier's Islip courthouse

46 AIA/HUD Housing and Community Design Awards

Departments

21 Editorial: The Chasm*

25 Letters*

53 Correspondent's File: San Diego *by David Hay*

57 Critique: Transportation systems *by Alex Marshall*

61 Books: Tales from artists who collaborate with architects

65 Practice Matters: 2001 economic forecast *by Charles Linn, AIA*

69 Snapshot: Finding new horizons *by Ingrid Whitehead*

276 Profile: Lynden Miller *by Ingrid Whitehead**

Features

74 How the New Economy Is Transforming Theory & Practice
by Michael Speaks
Theory has not been free or quick enough to deal with the blur of e-commerce and networked, open systems.

WWW * You can find these on our Web site at www.architecturalrecord.com. This month, find special coverage of the 10 featured firms, including audio interviews and slide shows.

The AIA/Architectural Record continuing-education opportunities are "Maintaining Security in an Insecure World" [page 153].

Cover: *Goszczycki Residence, Chicago, Ill., by Garofalo Architects*
Above: *Illang House, Ansung, South Korea, by Cho Slade Architecture*

Projects

81 Project Introduction: Design Vanguard *by Clifford A. Pearson**
Ten young design firms offer an intriguing vision of architecture's new directions.

82 Garofalo Architects, Chicago, *Ill.* *by Sarah Amelar**
Throughout Doug Garofalo's work, complex geometries fold and bend, departing decisively from the orthogonal.

88 Cho Slade Architecture, *New York City* *by Sarah Amelar**
Combining nature and building in collagelike designs, Cho Slade Architecture explores principles of continuity and abstraction.

94 Atelier Hitoshi Abe, Sendai, *Japan* *by Naomi R. Pollack, AIA**
Atelier Hitoshi Abe builds an international reputation from a regional base.

100 Design Office, Los Angeles, *Calif.* *by Suzanne Stephens**
Design Office incites people to interact with space, light, and materials.

104 John Ronan, Chicago, *Ill.* *by Sara Hart**
While always remaining true to the materials, John Ronan seeks the essence of space in structure.

106 Kuth/Ranieri Architects, San Francisco, *Calif.*
*by William Weathersby, Jr.**
Exploring the applications of industrial materials, Kuth/Ranieri embodies a blend of conceptual art and tactile architecture.

112 Sanaksenaho Architects, Helsinki, *Finland* *by Sarah Amelar**
Attuning its designs to both nature and modern life, Sanaksenaho Architects uses forms, moods, and materials in unusual ways.

116 Lewis.Tsurumaki.Lewis, New York *by Suzanne Stephens**
Lewis.Tsurumaki.Lewis explores how to make the familiar strange.

120 Birds Portchmouth Russum Architects, London
*by Adam Mornement**
Birds Portchmouth Russum adds wit and color to a diverse body of work.

124 SHoP–Sharples Holden Pasaquarelli, New York City
*by Clifford A. Pearson**
SHoP pulls disparate pieeces together to create a practice-driven firm with kick.

Contents continued on next page

12.2000

Contents continued from previous page







Irvington Place, Portland, Ore. (top), photographed by Dave Davidson. Chesterton High School, Chesterton, Ind. (bottom left), photographed by Emery Photography. EasySite (bottom right).

Building Types Study 792

131 Essay: Multifamily Housing *by James Russell, AIA*
Where politics dwell: Two essays offer varied perspectives on housing policy and how politics can play havoc with design.

136 Pensione Esperanza, San Jose, *Calif.* *by Lisa Findley**
David Baker Associates
A spirited yet dignified oasis of affordability in the Bay Area.

140 Ballpark, Hoboken, *N.J.* *by James Russell, AIA**
Sergio Guardia Architects
A new identity is asserted in a gritty industrial neighborhood.

144 The Townhomes on Capital Hill, Washington, *D.C.*
*by James Russell, AIA**
Weinstein Associates
Abandoned public housing is replaced with a mixed-income development that knits a neighborhood together.

148 Irvington Place, Portland, *Ore.* *by Sheri Olson, AIA**
Sienna Architecture Company
A neighborhood's fear of greater density is addressed with condominiums added to a busy retail strip.

Building Science & Technology

153 Maintaining Security in an Insecure World
*by Randi Nason, P.E.**
New strategies are emerging to help architects design without a bunker mentality.

159 Tech Briefs

The Digital Practice

163 The Digital Practice

165 Digital Briefs

166 Challenges for the Digital Generation *by Jerry Laiserin, FAIA, and Charles Linn, AIA*
Is the emphasis on digital tools leading to the neglect of important, fundamental design skills?

170 Touch vs. Tech *by Evan H. Shu, AIA*
Two leading proponents form an alliance to combine the best of hand-drawn and computer-rendered techniques.

175 Digital Architect *by Jerry Laiserin, FAIA**
New tools connect buildings and sites.

179 Digital Reviews *by Jerry Laiserin, FAIA**
Tools in the field, at the desk, on the Net.

Product Reports 2000

182 Introduction *by Rita F. Catinella**
This year, our annual product overview includes 30 pages of functional, well-designed product solutions, chosen from over 600 submissions by a panel of design experts.

185 General Data

189 Site Work

191 Concrete & Masonry

193 Metal, Wood & Plastics

195 Thermal & Moisture

197 Doors & Windows

203 Finishes

213 Specialties

215 Equipment

217 Furnishings

225 Special Construction & Conveying Systems

227 Mechanical

231 Electrical

242 AIA/CES Education Self-Report Form*

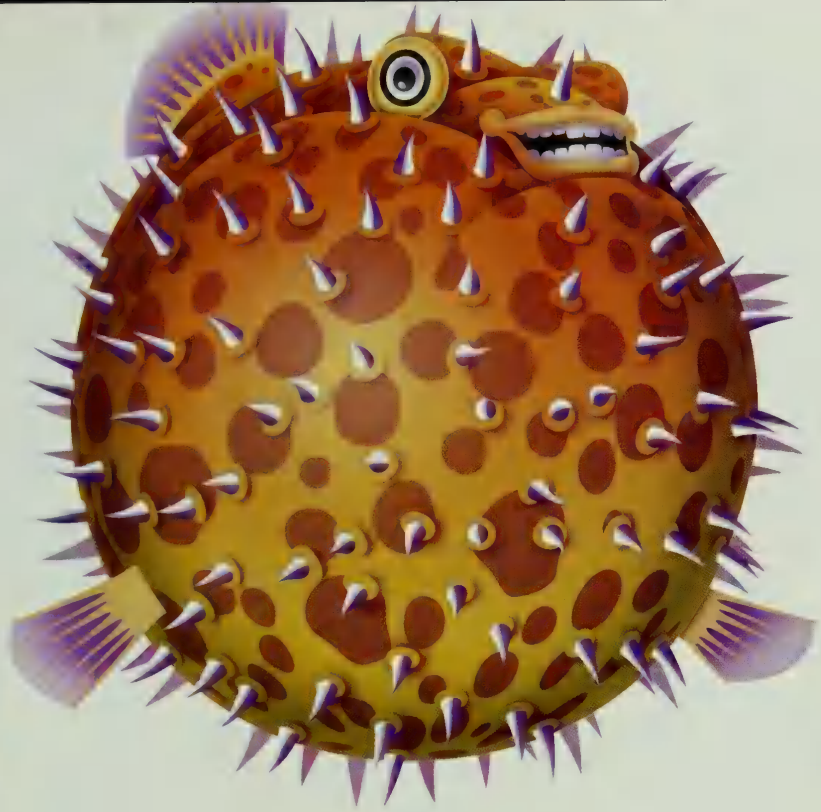
237 Dates & Events*

245 Manufacturers' Spotlight

273 Classified Advertising*

256 Reader Service Card*

9, 239 What's new at: architecturalrecord.com









THE CONCEPT BEHIND OUR POSITIVE PRESSURE DOORS.

When things get hot, the puffer fish expands. Really expands. That's exactly what happens to our positive pressure doors – enabling them to meet or exceed today's tougher UBC 7-2-97 fire and smoke control standards. The intumescent is completely concealed in the door, so they arrive ready to hang. Learn more about our expanding line of Positive Pressure Doors at **doors.weyerhaeuser.com**

CIRCLE 4 ON INQUIRY CARD

1.800.869.DOOR ext 2200

SOLID DOORS. SOLID PROMISES.™

Weyerhaeuser

You knew us as Monsanto Contract Fibers.

WE ARE THE PEOPLE THAT IMPROVED NYLON 6,6.

WE ARE THE PEOPLE THAT BRING YOU THE UNSURPASSED COLORS OF ULTRON® VIP.

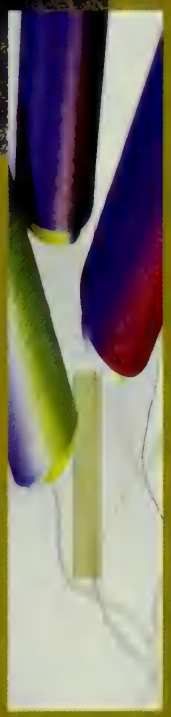
WE ARE THE PEOPLE STANDING AT THE TECHNOLOGICAL FOREFRONT.

LEADING A BRAND NEW COMPANY WITH 96 YEARS OF EXPERIENCE.

WE ARE NOW STRONGER. MORE FOCUSED. MORE AGILE.

WE ARE SOLUTIA.





Solutia

AT SOLUTIA, WE ARE DESIGNING THE FUTURE. COME WITH US.



SOLUTIA™

Applied Chemistry, Creative Solutions™

We would like to tell you more. Contact us at 1-800-543-5377, 1-770-951-7600 or www.ultronvip.com.

CIRCLE ▮ ON INQUIRY CARD



Go to WWW.architecturalrecord.com

ews
ily news
m the field

eekly
atures

ojects
oject
rtfolio
hting
ord houses

atures
gital
chitectural
een
chitectural
r/ar awards
erviews

alogue
itorial
ers

ntinuing
ducation

cruitment

lvertisers/
oducts

ofessional
ectories

out record
lex
scribe
vertise
torial calendar
ail policy
vacy policy

ntact us

ents

e map

me

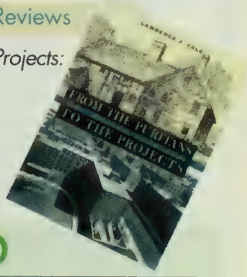
Quick Clicks...

Mondays: *Architectural Record* ARCHives

Wednesdays: New 'Green' features in Green Architect

Fridays: Architectural Book & Media Reviews

Book reviews: *From the Puritans to the Projects: Public Housing and Public Neighbors*, and other reviews throughout the month.



DAILY NEWS

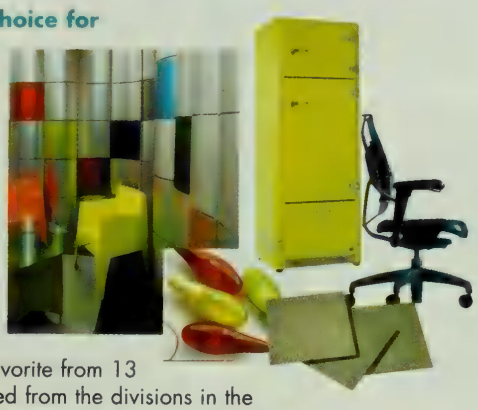
Get the latest scoops from the world of architecture.

FROM THE FIELD

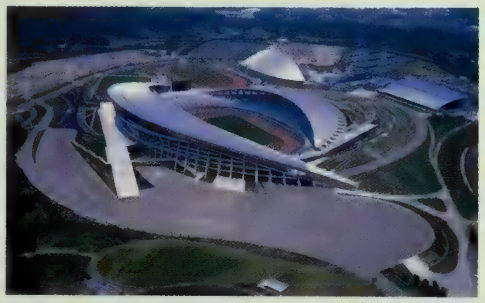
Tune in regularly for the latest buzz from *Record* editors.

Product Reports 2000 Online Poll

Voice Your Choice for Product of the Year! Visit our web site during the month of the December to cast your vote for Product of the Year in the **Product Reports 2000 Poll.** Choose your favorite from 13 products selected from the divisions in the December Product Reports issue. Final results of the Poll will be posted on the site in January.



Projects



Find links to people and products involved in December projects in the **Multifamily Housing BTS**. Plus, **Young Architects Project Portfolio:** Explore additional images of the projects featured in the December issue, reviews of the architects' own web sites, and audio interviews with the architects themselves. Hear them talk about what it's like to be a young architect, how technology influences their work, and where they see themselves in the future.

Interviews

Young Architects Speak. Tune in for audio-clips of interviews with December's featured young architects. Plus exclusive interviews with many other leading architects. Profile: Lynden Miller. (picture at right)

sponsored by revit



Earn CES Credits Online

Read *Record's* **building science** features/continuing education self-study courses and **file online for CES credits.** New this month: **Safer Places.**

Digital Architect

Connect to related high tech resources through web-only IT Vendor Guides and software reviews with links to manufacturer web sites. Find current and past coverage. This month's column: **Tools for Urban Environment Simulation.**

sponsored by **autodesk**

Green Architect

Find web-only 'Green' product reviews, links to manufacturers and weekly features on green projects and issues. **New weekly 'Green' features every Wednesday.**

Cool Jobs

Go to Recruitment to find career opportunities and information for architects and related professionals.

ITALIAN





Receive your free Marmora book with ASTM and buyers guide

www.marblefromitaly.com

Italian Trade Commission
1801 Ave of the Stars
Suite 700
Los Angeles CA 90067
323 879 0950
Fax 310 203 8335

CIRCLE 6 ON INQUIRY CARD

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Robert Ivy, FAIA
MANAGING EDITOR	Ingrid Whitehead
DESIGN DIRECTOR	Anna Egger-Schlesinger
SENIOR EDITORS	Charles Linn, AIA Clifford Pearson Sara Hart Sarah Amelar
NEWS EDITOR	John E. Czarnecki, Assoc. AIA
PRODUCTS EDITOR	Rita F. Catinella
COPY EDITORS	Elizabeth Kugler, Lisa Rosman
WEB CONTENT EDITOR	Kevin Lerner
ASSOCIATE ART DIRECTOR	Kristofer E. Rabasca
ASSISTANT ART DIRECTOR	Clara Huang
PRODUCTION COORDINATOR	Juan Ramos
WEB PRODUCTION SPECIALIST	Laurie Meisel
EDITORIAL SUPPORT	Linda Ransey, Randi Greenberg
EDITOR AT LARGE	James S. Russell, AIA
SPECIAL CORRESPONDENT	Suzanne Stephens
ILLUSTRATORS	Muriel Cuttrell, Kira Eng, I-Ni Chen
CONTRIBUTING EDITORS	Robert Campbell, FAIA, Andrea Oppenheimer Dean, David Dillon, Lisa Findley, Blair Kamin, Jerry Laiserin, FAIA, Nancy Levinson, Lee Mitgang, Robert Murray, Sheri Olson, AIA, Nancy Solomon, AIA, Michael Sorkin, Tom Vonier, AIA, William Weathersby, Jr.
INTERNATIONAL CORRESPONDENTS	David Cohn, Claire Downey, Tracy Metz, Naomi R. Pollock, AIA
SPECIAL SECTION EDITORS	Jane Kolleeny, Elizabeth Harrison Kubany
SPECIAL PROJECTS	Charles Pinyan, Paul Herrmannsfeldt
RESEARCH DIRECTOR	John Conkling
DIRECTOR OF PROMOTION	Deborah Smikle-Davis
FINANCE	Michael Florek, Shlomo Messinger
CIRCULATION	Maurice Persiani, Brian McGann
ADVERTISING PRODUCTION MANAGER	Stephen R. Weiss
ADVERTISING DIRECTOR	David Johnson
VICE PRESIDENT/PUBLISHER	Elaine Shusterman

EDITORIAL OFFICES: 212/904-2594 Editorial fax: 212/904-4256 E-mail: *rivy@mcgraw-hill.com.* Two Penn Plaza, New York, N.Y. 10121-2298
WEB SITE: www.architecturalrecord.com
SUBSCRIBER SERVICE: 877/876-8093 (U.S. only). 609/426-7046 (outside the U.S.). Subscriber fax: 609/426-7087. E-mail: *p64ords@mcgraw-hill.com.* AIA members must contact the AIA for address changes on their subscriptions. 800/242-3837. E-mail: members@aia.org.
INQUIRIES AND SUBMISSIONS: Letters, R. Ivy, *rivy@mcgraw-hill.com*; Lighting, C. Linn, *linnc@mcgraw-hill.com*; Books, C. Pearson, *pearsonc@mcgraw-hill.com*; Record Houses and Interiors, S. Amelar, *sarah_amelar@mcgraw-hill.com;* Practice, E. Kubany, *elizabeth_kubany@mcgraw-hill.com*; Products, R. Catinella, *rita_catinella@mcgraw-hill.com;* News, J. Czarnecki, *john_czarnecki@mcgraw-hill.com;* Web Editorial, K. Lerner, *kevin_lerner@mcgraw-hill.com*

SUBSCRIPTION: Rates are as follows: U.S. and Possessions $59; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $8; for foreign $10. Subscriber Services: 888/867-6395(U.S. only); 609/426-7046 (outside the U.S.); fax: 609/426-7087.
SUBMISSIONS: Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage.
SUBSCRIPTION LIST USAGE: Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, N.J. 08520.
OFFICERS OF THE MCGRAW-HILL COMPANIES: *Chairman, President and Chief Executive Officer:* Harold McGraw III. *Executive Vice President and Chief Financial Officer:* Robert J. Bahash. *Executive Vice President, Organizational Effectiveness:* Barbara B. Maddock. *Executive Vice President, Global Markets:* John D. Negroponte. *Senior Vice President and General Counsel:* Kenneth M. Vittor. *Senior Vice President, Corporate Affairs, and Assistant to the President and CEO:* Glenn S. Goldberg. *Principal Operating Executives:* Leo C. O'Neal, *President, Standard & Poors;* Robert E. Evanson, *President, Educational and Professional Publishing Group.*
MCGRAW-HILL CONSTRUCTION INFORMATION GROUP: Norbert W. Young, Jr., FAIA, *President*
COPYRIGHT AND REPRINTING: Title ® reg. in U.S. Patent Office. Copyright © 2000 by The McGraw-Hill Companies. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, Mass. 01923. To photocopy any article herein for personal or internal reference use only for the base fee of $1.80 per copy of the article plus ten cents per page, send payment to CCC, ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, N.Y. 10121-2298; fax 212/904-4256. For reprints call 609/426-5129 or fax 609/426-7087. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because the possibility of human or mechanical error by our sources, The McGraw-Hill Companies or ARCHITECTURAL RECORD does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions therein or for the results to be obtained from the use of such information of for any damages resulting therefrom.

PRINTED IN USA

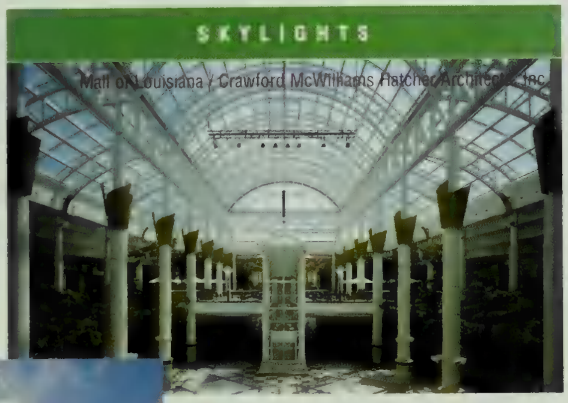
Architectural Record
McGraw-Hill Construction Information Group
A Division of The McGraw-Hill Companies

ABC MPA

THE AMERICAN INSTITUTE OF ARCHITECTS 2000 BOARD OF DIRECTORS • OFFICERS: *President:* Ronald L. Skaggs, FAIA; *First Vice President:* John D. Anderson, FAIA; *Vice Presidents:* Linda Searl, FAIA, Gordon H. Chong, FAIA, J. Richard Kremer, AIA; *Secretary:* Stephan Castellanos, FAIA; *Treasurer:* Harry Rutledge, AIA, RIBA • **REGIONAL DIRECTORS:** Roy Abernathy, Assoc. AIA, Jerry E. Abramson, Harold L. Adams, FAIA, RIBA, IIA, John Reid Benson, AIA, Bruce E. Blackmer, AIA, Derek Bradford, AIA, RIBA, ASLA, Timothy G. Cahill, AIA, Stephan Castellanos, AIA, Lugean L. Chilcote, FAIA, Donald M. Comstock, AIA, John F. Corkill Jr., AIA, Ben R. Darmer, FAIA, Richard Farson, Ph.D., Thomas G. Fernandez, AIA, Richard L. Ford Jr., AIA, John P. Franzen, AIA, James Gatsch, AIA, Holly K. Gerberding, AIA, Eugene Hopkins, FAIA, Timothy D. Kent, CAE, Edward Kodet Jr., FAIA, Lawrence R. Livergood, AIA, Kenneth Maynard, FAIA, David Messersmith, FAIA, Melissa Mileff, Barbara A. Nadel, FAIA, Robert L. Newsom III, FAIA, Thompson E. Penney, FAIA, Michael L. Prifti, AIA, Angel C. Saqui, FAIA, Larry M. Schneider, AIA, Katherine L. Schwennsen, AIA, Wayne D. Silberschlag, AIA, Bill D. Smith, FAIA, Marvin J. Sparn, FAIA, Douglas L. Steidl, FAIA, Ward Whitwam, AIA, David I. Wooley, AIA, Steven Winkel, FAIA; *CACE Representative:* Timothy D. Kent, CAE; *AIAS Representative:* Melissa Mileff • **AIA MANAGEMENT COUNCIL:** Norman L. Koonce, FAIA, *Executive Vice President/CEO;* Jim Dinegar, *COO;* Richard J. James,*CFO;* Chuck Hamlin, *Managing Director, AIA Communications;* Brenda Henderson, *Managing Director, AIA Component Relations;* Dale R. Ellickson, FAIA, *Managing Director, AIA Contract Documents;* Lisa Blackwell, *Managing Director, AIA Government Affairs;* Laura Ende, *Managing Director, AIA Human Resources;* Kimberly Allen, *Managing Director, AIA Knowledge Center;* Kenna Wood, *Managing Director, AIA Marketing and Research;* John Gaillard, *Managing Director, AIA Meetings and Events;* Nancy Somerville, Hon. AIA, *Managing Director, AIA Membership Systems;* Michael Copp, *Managing Director, AIA Professional Practice;* Helene Combs Dreiling, FAIA, *Managing Director, AIA Stakeholder Relations;* Philip D. O'Neal, *Managing Director, AIA Technology.*

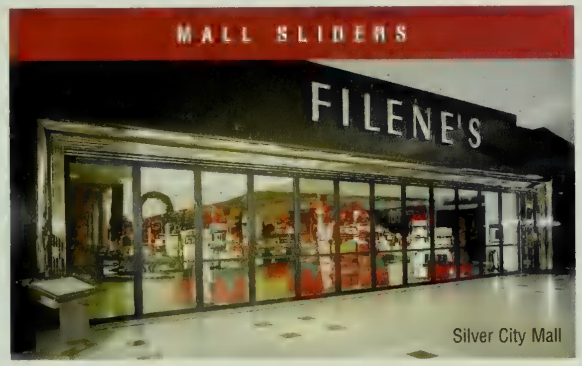
We've got a Lot in Store











At The Vistawall Group, we've helped create major malls throughout the country. alk about store credit.

From our curtainwall and skylights to our custom windows and doors, our roducts enhance some of the nation's finest meccas of merchandise.

We're your single source supplier: designing, engineering and manufacturing custom roducts for everything from major shopping and retail centers to the corner convenience arket.

The Vistawall Group. We've got a lot in store.

THE VISTAWALL GROUP
BUTLER MANUFACTURING COMPANY

800-869-4567
fax: (972) 551-6264
http:\\www.vistawall.com

THE VISTAWALL GROUP
BUTLER MANUFACTURING COMPANY

VISTAWALL ARCHITECTURAL PRODUCTS
MODULINE WINDOW SYSTEMS
NATURALITE SKYLIGHT SYSTEMS
SKYWALL TRANSLUCENT SYSTEMS

CIRCLE 7 ON INQUIRY CARD


UNION MASONRY CRAFTWORKERS, CONTRACTORS & CONSULTANTS

Team IMI helps turn steel into brick and block on a Pittsburgh waterfront.

Every construction project requires teamwork. Not only among the architects, developers and trades, but especially between the contractors, craftworkers and consultants. Team IMI is the union of these three partners. Our goal is to ensure that you always have enough of the world-class union craftworkers and contractors you need to complete your project—no matter how big, how elaborate or how visionary it may be. Our promise is that we do every job with a sense of pride and accomplishment unmatched in the masonry industry.



Team IMI's involvement with The Waterfront, a $300-million, 265-acre retail, residential, commercial and entertainment complex located on the site of a former USX steel fabricating plant six miles from downtown Pittsburgh, began when Continental Real Estate, Columbus, Ohio, the project's developer, and David Benjamin Meleca, the architect, started site work. Team IMI helped by first offering solutions to Continental's masonry construction needs. But since Continental was an out-of-town developer, Team IMI's most valuable assistance came in identifying and reviewing the work of local union contractors who might be appropriate for a project of this size. And after visiting the IMI training center, Continental knew that quality workmanship wouldn't be a problem on their project. Team IMI's staff of architects, engineers and construction consultants was also able to provide a comprehensive package of masonry-related technical services. The final result? A project fully staffed with world-class union masonry craftworkers.



Of course, The Waterfront in Pittsburgh is just one example of how Team IMI is making a real impact in the masonry construction industry. Thanks to comprehensive training programs at IMI's National Training Center and around the country at satellite centers, Team IMI is helping to meet the need for skilled union craftworkers and contractors nationwide. Team IMI mobile training units also make it possible to offer specialized training on your job site. And our technical expertise in codes, specifications and design trouble-shooting delivers the final piece of the puzzle. In short, with Team IMI, you're assured that the world's best union masonry craftworkers and contractors will always be available for your project, ensuring quality and imagination every step of the way. **To find out more, call 1-800-IMI-0988 or visit www.imiweb.org.**

team IMI
UNION MASONRY CRAFTWORKERS
CONTRACTORS ■ CONSULTANTS

The International Masonry Institute (IMI) is supported by the International Union of Bricklayers and Allied Craftworkers and the contractors who employ them in the U.S. and Canada.

Shelter is easy. Exhilaration is not.





This is your calling. To create an intriguing space. At your mercy are long-lasting windows that go far beyond wood and glass

©2000 Weather Shield Mfg., Inc.

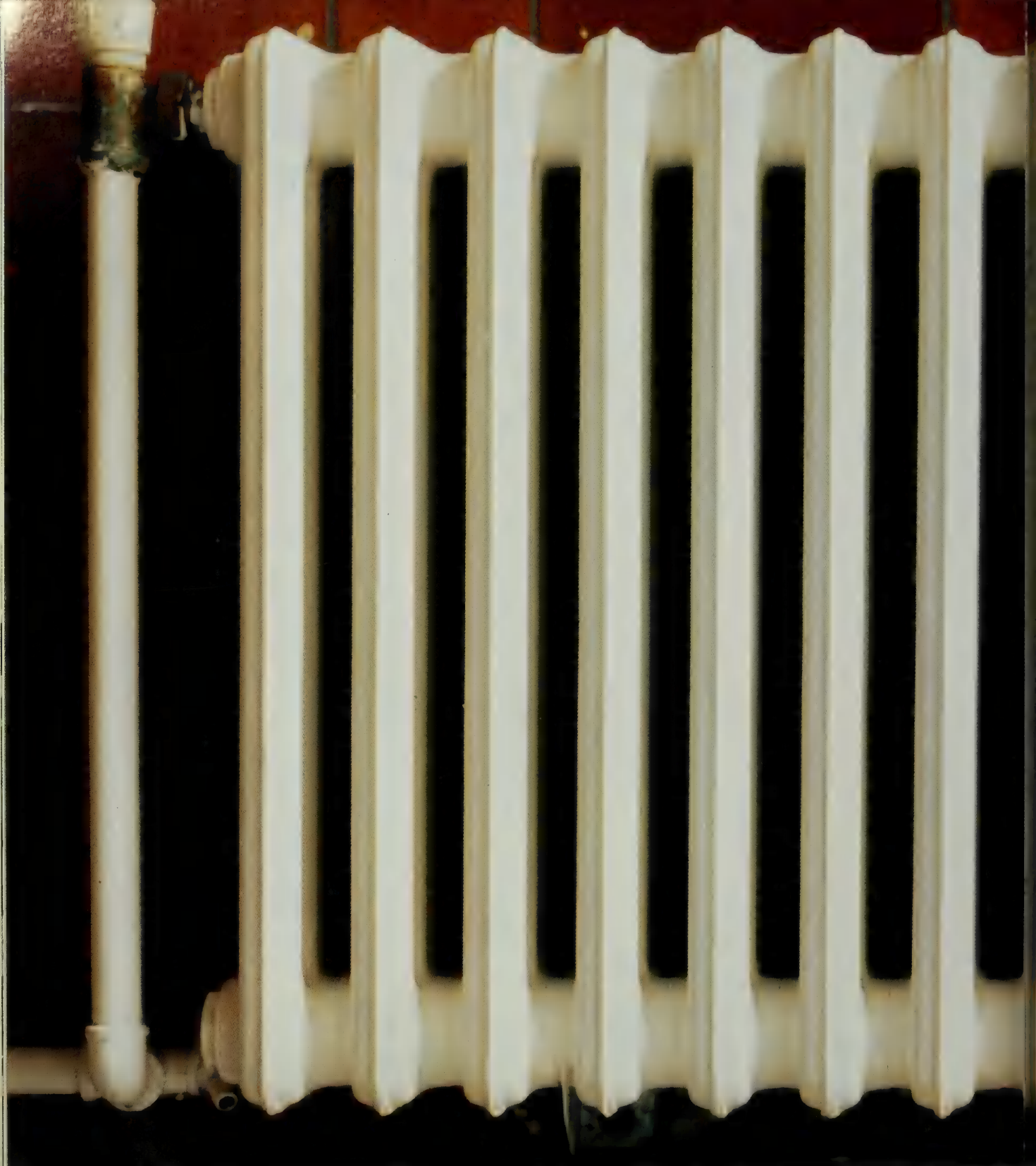


WEATHER SHIELD
WINDOWS & DOORS

Weather Shield
Windows & Doors

your specs to create a refuge that livens things up. Call 1-800-477-6808 x2344 or visit us at weathershield.com See the light.™

CIRCLE 5 ON INQUIRY CARD

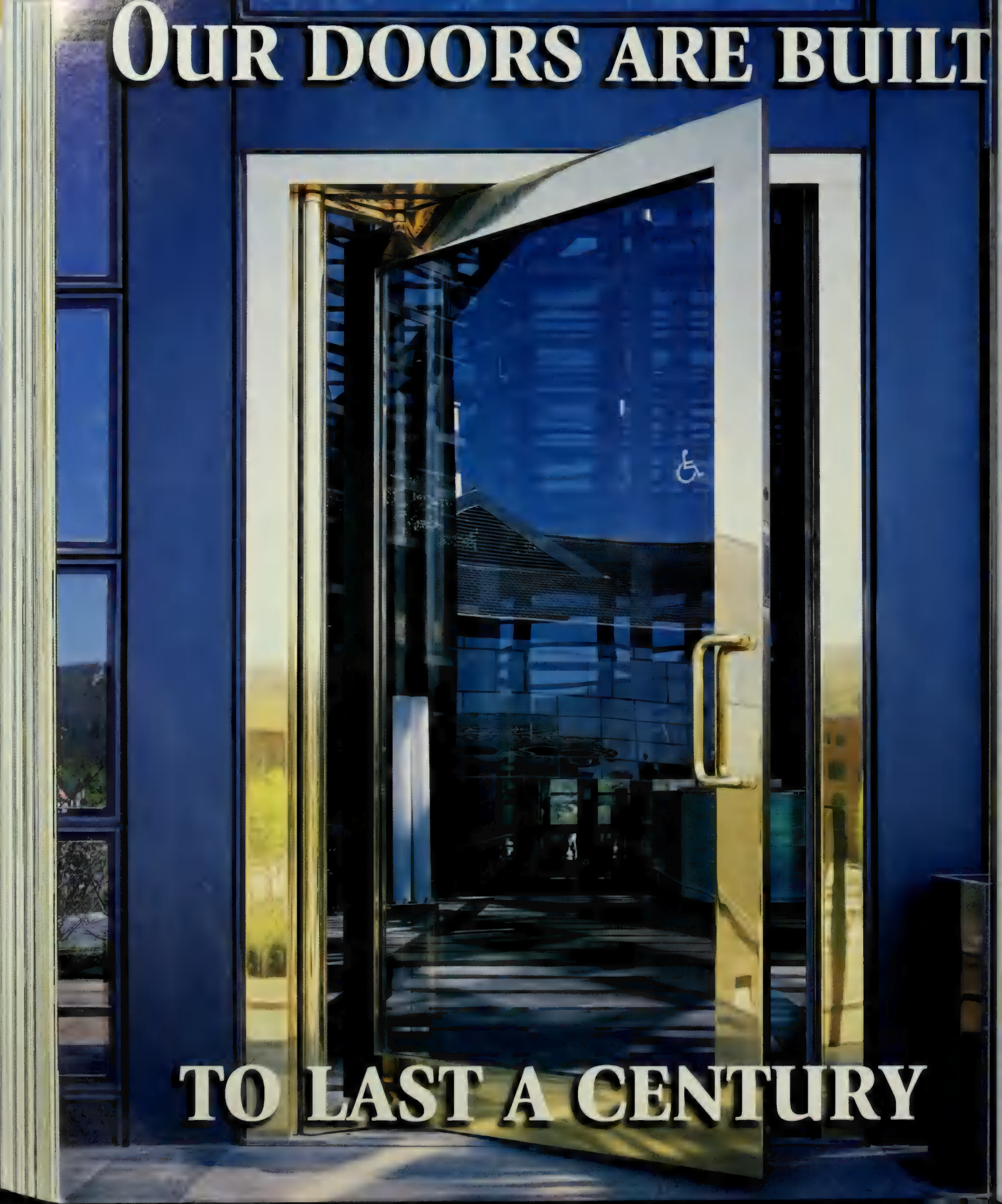


Feeling a little steamed about your CAD system? Instead try Revit.



www.revit.com
1 866 GO REVIT

revit
revolutionizing building design


OUR DOORS ARE BUILT
TO LAST A CENTURY

After 70 years in business we're happy to report:

So far so good.

Meticulous craftsmanship produces doors so durable most will outlive the buildings in which they're installed. What makes Ellison Doors virtually indestructible is a unitized superstructure created by welding a .09" continuous frame right through the .09" door face — rather than just tacking channel to the door edge. Seams between stiles and rails are also welded and then, in a painstaking process, ground and finished until welds and joints are invisible. Top rails and stiles are a minimum of 2-3/4" wide. Bottom rails are at least 6" deep. The specs on our glass doors and aluminum doors are equally impressive. And all of our balanced hardware is manufactured in our shop, so replacement components are available for every door we've ever made. Contact us today for complete information and technical support.



ellison

Ellison Bronze

A Division of Dowcraft Corporation

800-665-6445 ▪ www.ellison-bronze.com

CIRCLE 9 ON INQUIRY CARD

Designing with copper?



Omnicom Group, Venice, Calif.
Frank O. Gehry & Associates



Ceridian Corporation, Bloomington, Minn.
Hammel Green and Abrahamson Inc.



Phoenix Central Library, Phoenix, Ariz.
bruderDWLarchitects

You're not alone.

You've got the Copper Development Association by your side. Our *Copper in Architecture* program has all the information and technical assistance you want.

Want design details and specifications? The *Design Handbook* has them for virtually every application. They're available in hard copy, on CD-ROM and in AutoCAD® files. Want to learn about copper roofing? Our six-part videotape has loads of information on forms, shapes and details. We even have a 72-minute video installation guide for contractors. Need to earn continuing education units? We offer AIA accredited seminar and self-study programs that explore design fundamentals, techniques and installation. Plus, you have access to our technical databases, training programs and listings for manufacturers, local suppliers and contractors.

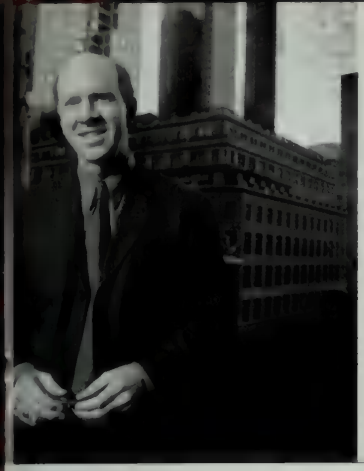


Want to design with the material that helps the world's most famous architects stand out from the crowd? We'll stand beside you. Call **888-427-2411** or visit us at ***http://architecture.copper.org*** today.

COPPER

Unique. Beautiful. Enduring.

CIRCLE 10 ON INQUIRY CARD



Editorial

By Robert Ivy, FAIA

A chasm, like a great seismic rift, appears to separate two generations of architects. On one side, the buzz-cut and clunky-shoed generation, plugged in to their laptops, CDs, and cell phones; on the other, everybody else. The techie generation dresses in retro style, reads Wallpaper *and* Wired, *works odd hours, and treats work like play. Everybody else is simply uncool, archaic, and so analog.*

This exaggerated vision of a bifurcated profession points out fundamental contrast between two generations, a situation heightened by digital technology. As architects develop new tools for practice, their methods of documenting and conceiving ideas have separated them into two camps: those who draw and those who don't, those who design three-dimensional imagery on the screen and those who still sketch (read "Challenges for the Digital Generation," page 166). Concurrently, the older generation is leveling charges that the younger group lacks fundamental knowledge and skills that the schools should be providing. Aren't the young ones disaffected? Aren't their bosses hierarchical and clueless? Fingers are pointing in myriad directions, to no avail.

Peel off the hype, however, and a more subtle story emerges. A personal anecdote might help set things in perspective. When I graduated from architecture school, my first assignment was to produce the drawings for the heroically scaled louvers of a federal office building. Even though I had worked in college, I was nervous about producing real sheets of drawings for a high-rise. An old hand, a heavy-smoking architect who had risen through the experience route, took me under his wing. Through Don's alternately calm and raucous day, he taught me the strategies of sheet layout, the way to integrate drawings with specifications, and the interrelatedness of details. Though not many years separated us, Don was my mentor, and he could draw like a fiend.

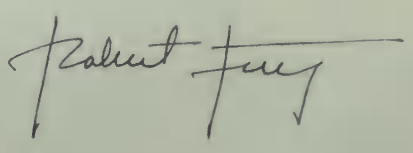
Surprisingly, my personal tutelage was played out against substantive changes in production methods: the architectural world was shifting from paper to automated reproduction, from vellum to plastic, from all hand work to typed sheets, from diazo-reproduced specs to cut and paste. How we conveyed information was completely up in the air, but my own need for information and for help was constant. To this day, it is Don I remember, and what he taught—not the shift in methodology.

Such is still the case today. Developing architects need older ones; answers to a young architect's questions may not always be technical, but human. The language may be shifting, but we still need to know how to interact with clients and each other, and we need the knowledge that comes from human experience—what works well, what not to do, and what methods and materials make sense. We still have knowledge and experience to transfer, whether on roof flashing or project management.

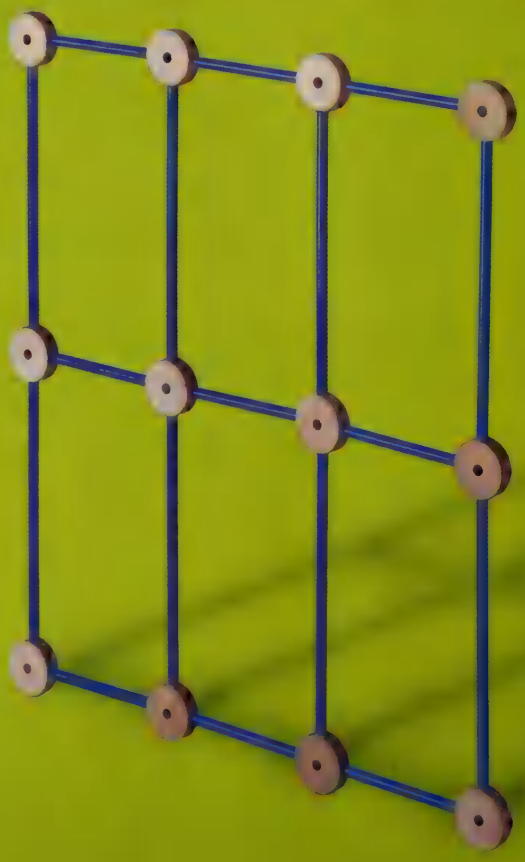
Besides, architects invariably see themselves as young, even as they mature. Much of our best work comes relatively late in our chronological development. Joe Valerio summed up this passion for intellectual ferment in a panel last month in Chicago when he said that the role of the architect is to "shake things up," a statement of deep commitment, intellectual engagement, and risk taking that precludes age discrimination.

What continues to move us? The need for, and love of, learning. Social consciousness expressed in planned and built form. The love of making things, real or virtual, drawn or imagined or built. An inquiring intellect. The desire to make a life with meaning.

Technology may have divided us for the moment, but technology is a means, not an end; the values and enthusiasms we share will inevitably prove stronger than any new language, new tool, or superficial cultural difference. Although it may yawn precipitously, perhaps the gap actually isn't as wide as it appears: the architect on the far side is not an anonymous employee, but a younger version of ourselves.

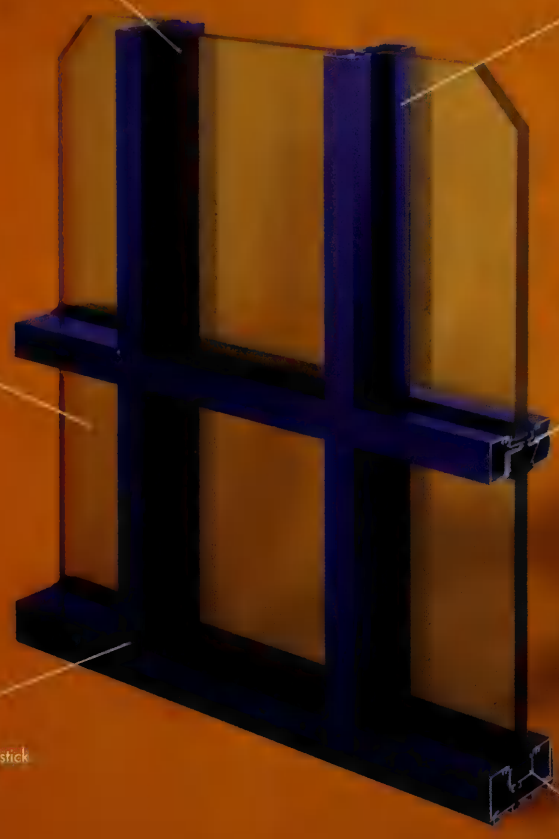


WE DIDN'T INVENT VERSATILITY.



Trifab® VG (VersaGlaze®) takes the proven Trifab platform and makes it more usable than ever, adding unmatched fabricatio flexibility with the ability to select front, center, back or multi-plane glass planes. Combined with multiple choices in glazing infill thermal options and SSG and Weatherseal alternatives, Trifab VG from Kawneer lets you achieve any level of performance wit

WE JUST REFINED IT.



Front, center, limit or multi-plane glass application.

Seven Permanella® Anodized finishes or special finishes in 42 standard and unlimited custom colors. Powder coatings add environmentally friendly colors in 14 standard and custom choices to your palette.

Pressure-locked Thermal Break option. Designed to AAMA TIR A8 and tested to AAMA 505.

Choices of screw spline, sloped fillet, stick or Type B fabrication.

Tested to ASTM E 283, AAMA 501, ASTM E 331, ASTM E 330, AAMA 1503, AAMA 1601 and ASTM E 1233.

rtually any design aesthetic, whether you're toying with a remodel project or new construction.
rsaGlaze, a new era in design and fabrication flexibility. For architectural product applications
d technical assistance, contact our architectural services team toll free at 877-767-9107.

CIRCLE 11 ON INQUIRY CARD

Kawneer

The Mark of Responsibility

www.kawneer.com



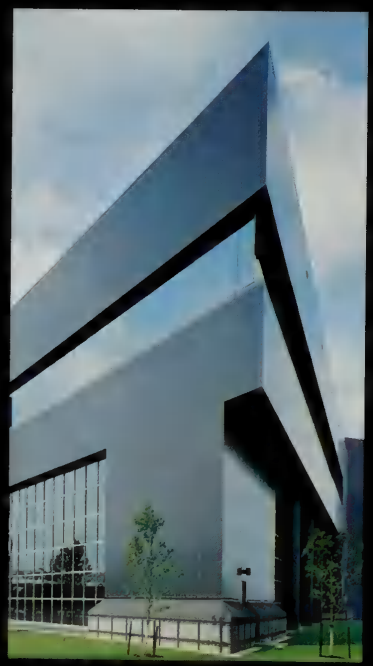


A Panel Discussion

When you're talking design flexibility, contemporary appearance and affordability, you're talking Alucobond® Material.

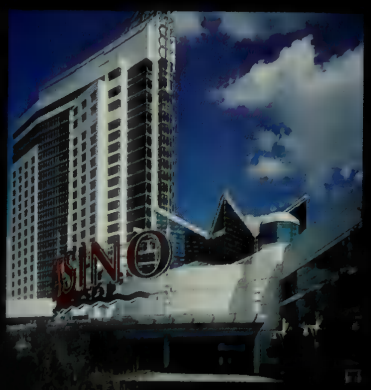


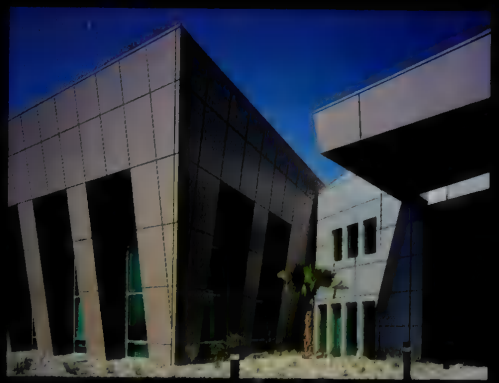
Created 30 years ago as the first-ever aluminum composite material or ACM, Alucobond Material has contributed to the design excellence of more than 50,000 buildings worldwide. Alucobond Material's success is due in part to its network of distributors/fabricators–clearly the best in the industry. These partners offer unequaled knowledge and expertise regarding all aspects of fabricating and installing aluminum composite material.





And that translates into unequaled benefits for you. So consider Alucobond ALUCOBOND® MATERIAL Material for your next design challenge. You'll experience the confidence that comes only with the best product and people in the industry.





alusuisse composites

Alusuisse Composites, Inc.
P.O. Box 807 • 200 W. 5th Street • Benton, KY 42025
800-382-6445 • 270-527-4200 • Fax 270-527-1552
www.alusuisse-cmt.com

CIRCLE 12 ON INQUIRY CARD

Letters

Powerful narrative

There's something significant to the history of architecture, and that is architecture's ability to tell powerful stories.

What I noticed, more than anything else in this year's RECORD INTERIORS [SEPTEMBER, page 107], is the lack of "narratives" and the reliance on form (in many cases "clichéd" form), to create so-called cutting-edge environments.

Perhaps only the work of Morphosis comes close to what I'm suggesting. The restaurant Tsunami, in particular, seems to evoke the vertiginous character of its name, in many ways serving as a certain culture shock in relation to the pan-Asian cuisine. Lutèce, as well, echoing a roulette wheel, joins Tsunami in an attempt to create real architecture in a world of the most banal artifice.

But even these examples stand at a far distance from the fairly simple idea of using form to tell a story about a specific region or site. The bloblike forms of the new baroque are, in this way, no different than the sliced, tortured forms of deconstructivism.

I believe an architecture of operatic narrative, independent of form yet aware of and capable of driving form, remains the most powerful way of creating meaningful space.

—David Kesler
Via E-mail

Stairway to heaven?

It's funny how, out of eight beautiful examples of "Beckoning Staircases" [SEPTEMBER 2000, page 94], seven came from our friends across the pond and none of the seven met today's accessibility codes in America. By worshipping at the shrine of accessibility, our country's well-meaning activists and lawsuit-fearing bureaucrats have hamstrung America's designers. This isn't to say that we shouldn't strive to provide access to all in our architecture—it is just that the bar has been lowered to a point that mandatory handrail extensions and door-swing clearances have become more important than architectural expression.

—Michael E. Berg, AIA
Sjoquist Architects
Via E-mail

Postwar architecture at risk?

Regarding Richard Longstreth's Critique [SEPTEMBER 2000, page 59]—what has happened to our historic consciousness when preservationists focus on fighting a holy war to preserve obsolete, distressed public-housing projects in Houston, Atlanta, New Orleans, and Orlando (originally conceived to promote segregation and warehouse the poor), yet passively stand by as our modern architectural heritage goes the way of McKim, Mead and White's Pennsylvania Station in New York? Has the pendulum of Postmodernism, neoclassicism, New Urbanism, and the latest "retro-ism" blinded us to the mistakes of our past?

What act of blatant disregard will it take to rally those zealot preservationists? The demolition of Fallingwater, Ronchamp, or the UN? Must we repeat history and sacrifice a 20th-century equivalent of Pennsylvania Station before we become outraged? I certainly hope our generation is not that foolish.

—Stephen J. Hruby, AIA
New York City

Congrats to Richard Longstreth for his piece. Obviously it is a thrill for me to see such a gorgeous rendition of my building, with the clouds seemingly cooperating to emphasize the grand ramp that takes visitors to a rooftop viewing deck—the only way to gain a panoramic impression of what it must have been like for the Union troops to contemplate Pickett's oncoming charge.

The positions of preservation organizations cited by Longstreth were taken some three years ago, when the Park Service was maligning the building as mediocre. Now that it qualifies for listing on the National Register and will again in November be offered for National Landmark Status, its preservation should be reconsidered at the same time by the National Trust at its L.A. convention. If the Trust will take note of the respect and increased admiration that have recently come to this building, let's hope reason will prevail, at least in this case.

Our support campaign, as illustrated on neutra.org, has to date produced over 600 letters from residents of 40 states and every continent except Antarctica. It would be an international scandal if this policy were carried out! Interested persons should now join and send letters of support to encourage a change of policy here. An adaptive reuse is eminently possible in this case, where the building is NOT in the way of any proposed development.

The motto of our campaign has been "It ain't over till it's over!"

—Dion Neutra
Los Angeles

Architects first

Apart from not being very politically correct in the title, "Technology Enables Disabled Architects" (which should be "Technology Enables Architects with Disabilities"), BJ Novitski's recent Digital Architect [SEPTEMBER 2000, page 189] was very informative and a pleasure to read. The subtle—yet important—distinction in the title is that people are architects first and have a disability second.

I am pleased to know that there are so many other architects with disabilities out there. I personally have a visual impairment that is assessed at 20/200 vision (considered legally blind), and I'm glad that vision is not the only skill needed to be an architect.

Although I am adapting well with the minor technological improvements I have made (a larger monitor and reading glasses), I feel that the real power in the article came from two ideas: the mentoring program and the idea that architects with disabilities can be skilled designers and problem solvers.

—Kelly S. Stadnyk
Kirk Miller Affiliates
San Francisco

Loft-y ideas

The loft apartment in RECORD INTERIORS ["SoHo Loft," SEPTEMBER 2000, page 138] was full of great ideas for solving an old problem of getting light into a narrow, deep space, and your layout presented a good solution with clarity. However, considering that it is inhabited by a couple with two small children, I couldn't help trying to imagine it with a few refrigerator magnets, Legos on the floor, and a stuffed Big Bird in the open bedroom (i.e., taking it from simply being a good idea to being a home). This kind of detail might have better answered the architect's question posed in the third paragraph, "How do people today integrate work, family, and pleasure?" This layout reads well but does not, in my opinion, answer the question.

—H. Paul Sheffield
Kailua, Hawaii

EMP, a space odyssey

The August issue exhibits a series of photographs of Frank Gehry's Experience Music Project [EMP, page 126]. Mr. Gehry states, "No one will ever do this again," and whether he was talking of steroidal geometry of construction or expense or both, I hope he is right.

Letters

This complex reminds one of a collision of eight spaceships. And to call it architectural is giving the meaning of architecture a bad rap.

I guess I wouldn't have the courage to try to create something resembling this and I also guess that Mr. Gehry's reputation as a skillful architect will not be too tarnished.
—Robert Jenks, AIA
Palo Alto, Calif.

Architects can be snobs

I agree with your September editorial that the education of interior designers must become more rigorous regardless of whether or not they achieve licensure. But, may I remind readers that, with a few exceptions, architects generally look down their noses at anyone who is not an architect. I learned this years ago as a "civilian" member of the board of the Architectural League of New York. Interior designers are not the only professionals singled out by architects for lack of respect.
—RitaSue Siegel, IDSA, President, RitaSue Siegel Resources

Why would the AIA *not* insist that interior designers be regulated? Perhaps the answer lies in your statement "The stakes are large, the fees alone in the industry well exceed $1 billion."

I find the AIA's position on this issue to be entirely self-serving. A well-written practice act will require interior designers not only to have a minimum level of education, experience and testing, but will also require continuing education—all of which contribute to the safety and well being of the clients we serve.

You stated, "Interior designers seek to distinguish themselves from less qualified decorators, protect the right to practice, establish gender equity in a field dominated by men, and earn the respect of their fellow professionals." In addition, "Interior designers want to increase their share of the burgeoning market." What's wrong with any of those goals? We are seeking a higher level of professionalism and, yes, a larger share of fees in the market, none of which are negative goals, except that it means more competition for members of the AIA.
Diane Brandli, ASID, Certified Interior Designer, Syracuse, N.Y.

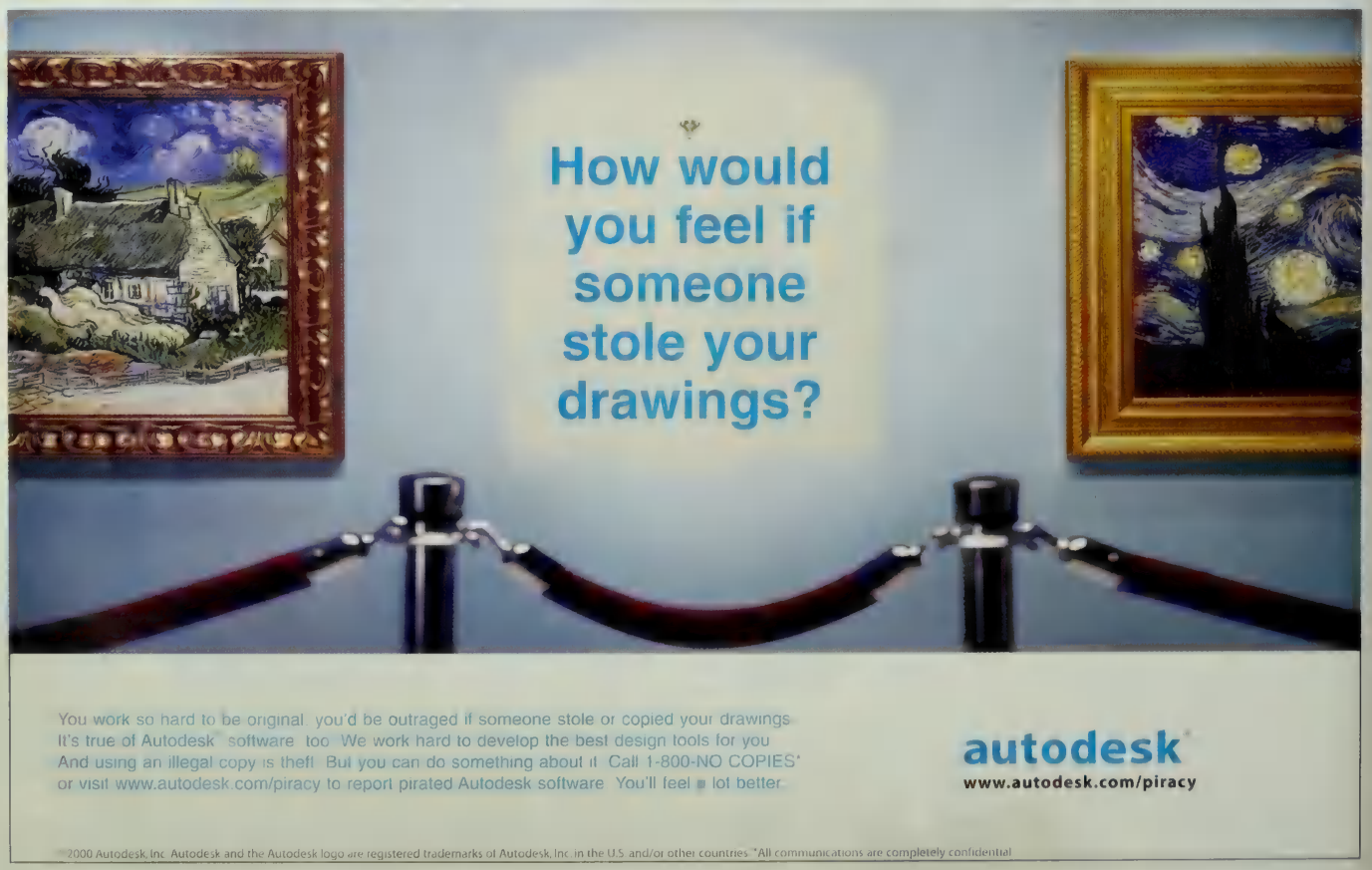
Corrections

In the October issue [RECORD News, page 36] Laurinda Spear's name was incorrectly spelled Speer. On that same page Whirlwind & Company was overlooked as the exhibit designers. In the same issue [Business Week/Architectural Record Awards, page 105], the image at bottom left should have been credited to François Bastien. The Web sites mentioned at the end of the tech brief on page 182 should be amended to: www.hydrotechusa.com/garden.html; www.sarnafilus.com/GreenRoofs.htm. On page 40 [RECORD News] the illustration at top should be credited to Christopher Grubbs. In the November issue [pages 98–99], image #1 should have been credited to Adam Woolfitt/CORBIS and is Castle Howard, not Blenheim Palace.



Due to a printing error in the November issue, the above photo was inadvertently omitted [RECORD News, page 33]. The photo depicts the site of the proposed New York Times tower by Renzo Piano at 8th Ave. & 42st, N.Y.C. Photo by John E. Czarnecki.

Letters can be E-mailed to rivy@mcgraw-hill.com. RECORD reserves the right to edit for length, style, and grammar.





A Toast To A Champagne Anodized Finish That's Color Consistent.

If your taste for Champagne has been dulled by inconsistent color, may we suggest YKK AP Champagne. Our vertical immersion process delivers an anodized finish that's consistent in color from piece to piece, day to day. And our Anodized Plus® surface treatment protects the finish through the years. Just the kind of attention to detail you've come to expect from YKK AP, a world leader in architectural aluminum. Call your YKK AP sales rep, or go to www.ykkap.com.

YKK ap America

©2000 YKK AP America Inc., a subsidiary of YKK Corporation of America.

CIRCLE 13 ON INQUIRY CARD



Washington Hall, center stage for theatre and cultural events at Notre D
Built in 1881, this modern Gothic structure was named by Father Sorin
himself, Notre Dame's founder, in honor of his great hero, George Washingt

You've got to be good to go into Notre Dame and leave with a victory.

When the University of Notre Dame decided to replace the windows in two of the more historic buildings on its storied campus, all the major manufacturers wanted the job. But as they learned more about the size and scope of the project, the list began to dwindle. Since both buildings are on the National Register of Historic Places, Notre Dame wanted windows with wood interiors that matched the appearance and profile of the originals. To minimize maintenance, another demand was aluminum clad exteriors. Marvin Windows and Doors emerged victorious. And designed and built 310 windows for the project, not one of which was a standard size. Not only that, but the casings were factory applied and a custom color for the exterior cladding was developed to replicate the 100 year-old originals. If you have a challenging commercial project, contact the company that has a reputation for winning the tough ones.



The wood interiors of Marvin's windows are virtually identical to those installed a century ago. For the exterior aluminum cladding, an appropriately-named custom color was created: Irish Bronze.



MARVIN
Windows and Doors
Made for you.

For a free catalog, call 1-800-236-9690. In Canada, 1-800-263-6161 www.marvin.com

1200012A

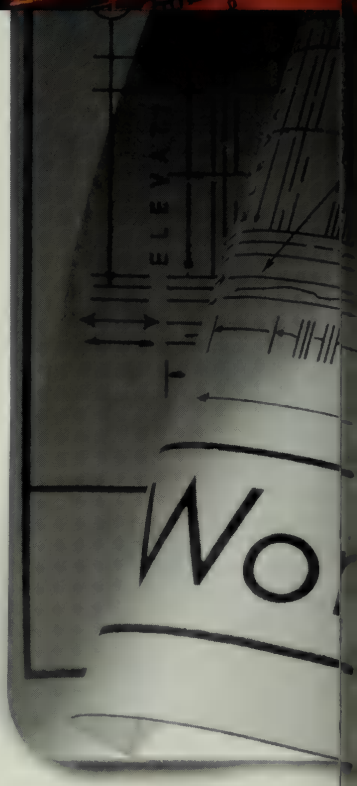
CIRCLE 14 ON INQUIRY CARD

DORMA

You put your heart and soul into designing a building. It's not merely a structure. It's a piece of you. No matter who owns it, no matter what it's called, it will always be your building. We know. For more than 90 years, DORMA has helped architects create grand entrances and safe exits by marrying aesthetics and functionality. The entranceway at the World Trade Center is a shining example. As are thousands of prestigious buildings throughout the world. We lead the world in door technology. So if you want to make a great impression, insist on DORMA. After all, architectural marvels are not built on compromises. To see more of DORMA products, call us or visit our web site. Or simply walk into the World Trade Center.



You don't just spec a door. You put your signature on it.





DORMA Architectural Hardware
800-523-8483



DORMA Automatics
877-367-6211



DORMA Glas
800-451-0649



Crane Revolving Doors
800-942-7263



www.dorma-usa.com

©2000 DORMA Group North America. All rights reserved.
DORMA is a registered trademark of DORMA Properties, Inc.

CIRCLE 15 ON INQUIRY CARD


IMPRESSIVE.
{ moon dus
COLOR: #58
AVONITE
Innovations in solid surfacing
1-800-428-6648 / www.avoni
CIRCLE 16 ON INQUIRY CARD

Record News

Highlights DC Metro canopies p. 34
Meier's Islip courthouse p. 36
Jane Jacobs wins Scully Prize p. 38
KPF's first building in Spain p. 44

Bright light city: Koolhaas' Vegas Guggenheim

What results when Rem Koolhaas, the Solomon R. Guggenheim Foundation, and the State Hermitage of St. Petersburg, Russia, collaborate on two galleries at the Venetian Resort-Hotel-Casino in Las Vegas? The answer is on a fast track for spring 2001.

On October 20, the Solomon R. Guggenheim Foundation revealed plans for two galleries in a joint-venture Guggenheim and State Hermitage project at the Venetian in Las Vegas. Designed by Pritzker Prize–winning architect Rem Koolhaas, the galleries will be separated by a sea of slot machines in the Venetian.



Koolhaas admits that it was "difficult to establish a place for art and seriousness in Las Vegas." His solution was to create two Guggenheims, "partly independent and yet forming a seamless mold through the casino." He described them as a "stark contrast" to the Venetian setting, yet says they will "merge completely with the casino experience."

One of the galleries is a 7,600-square-foot "jewel box" near the porte-cochere entrance. The simple rectangular box has seven-foot-thick movable interior walls that enable the gallery to work as one large space or be partitioned into smaller rooms. The entire gallery is constructed in Cor-Ten steel, rusted to imitate a velvety fabric.

The second, more significant gallery is a 63,700-square-foot "container-like" structure wedged between the hotel and its 10-story parking garage. Although three-fourths of the standalone building will be obscured, there will be one exposed facade. The raw warehouse-style interior consists of three main chambers defining a classic museum experience. A massive six-story door will stand at one end of the hall, while another door will serve as a media wall, with projected images on its surface. The 70-foot-tall ceiling, painted with a reproduction of Michelangelo's Sistine Chapel, consists of two enormous mechanical panels that open to allow fresh air and daylight into the area. When the ceiling is open, the Michelangelo painting will face outward and up; for people looking down from the hotel tower, it will look like a giant advertisement for "art."

Construction began in September. Total costs have not been disclosed, but Venetian president Rob Goldstein calls it "expensive." The Venetian spent $1.3 billion building its own facilities and had a $10.8 million net profit in the last nine months. *Tony Illia*



Koolhaas (above) presents his Guggenheim design (left) and model (above).

CALATRAVA TO DESIGN OAKLAND CATHEDRAL

Santiago Calatrava was named architect for Oakland's Christ the Light Cathedral in November. Calatrava won the commission in an invited competition with Ricardo Legorreta and Skidmore, Owings & Merrill's Craig Hartman, FAIA.

Calatrava's design will have movable glass-and-steel sections. "The idea was for a building that would be like a pair of hands," Calatrava says. "The hands can be brought together in prayer or they can be opened to the sky."

A cathedral site has not been selected and the project budget is yet to be determined. The new cathedral will replace St. Francis de Sales—demolished after the 1989 Loma Prieta earthquake. *JEC*

Guggenheim, with Gehry and Koolhaas, sets its sights on Brazil

The Guggenheim Foundation is heading south for its next venture. A feasibility study and site analysis have been initiated for potential Guggenheim cultural projects in Brazil. The Guggenheim Museum franchise is targeting Rio de Janeiro as a potential museum location, and may plan for an additional branch in Salvador or Recife in Brazil's northeastern region. A Guggenheim team with Frank O. Gehry, FAIA, and Rem Koolhaas initiated the study and toured potential sites in Brazil in early November. The study will be complete in spring 2001.

The Rio museum could be part of a larger complex with a concert hall, convention center, and retail. According to Edemar Cid Ferreira, president of the Brazil-U.S. Council, the likely Rio site is a waterfront area with dilapidated shipping warehouses. In a November news conference, Gehry recommended "getting into the gritty" of Rio.

This is the Guggenheim Foundation's first South American venture. The Guggenheim has two museums in New York, museums in Bilbao, Venice, and Berlin, and facilities opening in Las Vegas in 2001. *John E. Czarnecki, Assoc. AIA*

OFF THE RECORD

Landscape designer Lawrence Halprin won a National Design Award for environment in November. Finalists for the award were architects Will Bruder, Steven Holl, AIA, Thom Mayne, AIA, and Samuel Mockbee, FAIA. The award [OCTOBER 2000, page 44] is given by the Smithsonian's Cooper-Hewitt National Design Museum.

Ove Arup Partnership has shortened its name to Arup.

President Clinton named Hsin-Ming Fung of Hodgetts + Fung Design Associates, Los Angeles, as a member of the National Council on the Arts, which advises the National Endowment for the Arts on policies and programs.

British firm Alsop and Stormer has been commissioned by the Ontario College of Art & Design in Toronto to create a new Centre for Design and renovate existing facilities. The firm also received the top architectural honor in the U.K., the Stirling Prize for Building of the Year, for the Peckham Library and Media Centre [SEPTEMBER 2000, page 51] in London.

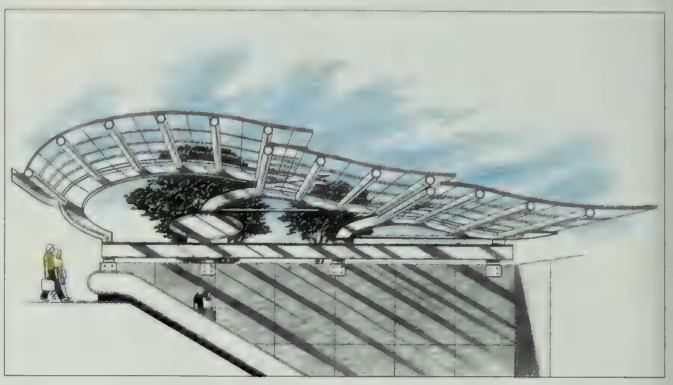
Jane Frederick, AIA, lost her bid to be the only architect in the 107th U.S. Congress. It was her second attempt to defeat incumbent Republican Floyd Spence in South Carolina's Second House District, but she lost 57% to 41%.

Five architects are competing for a $90 million expansion of the Carnegie Science Center in Pittsburgh: Ben van Berkel, Peter Eisenman, Daniel Libeskind, Jean Nouvel, and Bernard Tschumi. The winning architect will be chosen in January.

London's MacCormac Jamieson Prichard won the commission for a renovation and addition to the BBC's Broadcasting House.

Venturi Scott Brown Associates will design a Media Center in Gary, Ind.

DC Metro canopy design controversy



Arthur Cotton Moore's design for the Metro canopies was met with protest.

In response to criticism about the architect-selection process for series of subway entrance canopies, the Washington Metropolitan Transit Authority (WMATA) revoked the commission from Washington, D.C., architect Arthur Cotton Moore, FAIA, then announced a design competition for the project.

The debate centers around the design of 53 escalator canopies intended to shelter outdoor Metro entrances from rain and snow. WMATA engineers had initially presented a design to the Commission of Fine Arts (CFA), which has jurisdiction over 21 of the 53 Metro stations in question. CFA chair Charles Atherton, in a *Washington Post* story on the canopies, said, the engineers' design "looked pretty heavy-handed."

After reading the *Post* article, Moore called WMATA officials and offered his design services. He was referred to WMATA contractors, who welcomed the locally renowned architect's assistance. Moore's design was unanimously approved by the CFA.

A story about Moore's design and a drawing by Moore were published in a subsequent *Post* story. Local architects, who noted that the Metro canopies will have a significant presence in the region, protested both Moore's design and the architect-selection process. In a letter to the board of WMATA, Julian Hunt, Assoc. AIA, wrote that Moore's design was "nothing more than an architectural comb-over." Clarifying his attack, Hunt says, "[WMATA] bureaucratized the process. I was tired of having younger, maybe more innovative, architects without any voice at all."

AIA DC Executive Director Mary Fitch says, diplomatically, that "since architects involved are members, we're refraining from commenting on the quality of the design, but we do feel the process should be reevaluated."

Patricia Moore, speaking for Moore's office, denied that there was a controversy over the design. "There is no controversy," she says. "The only controversy is this letter [by Hunt], which was overblown. The Commission of Fine Arts approved the design unanimously."

Defending the selection of Moore, Ray Feldmann, WMATA's director of media relations, says, "Mr. Moore is the only one who called. Maybe if we'd gotten four or five or six phone calls, we'd have done a competition [in the first place], but the fact is, Mr. Moore was the one who called."

Taken aback at the furor, the WMATA board reconsidered and voted unanimously at its November 9 meeting to hold a design competition. The time frame for the competition, which will narrow a field to three finalists and Moore, is yet to be determined. A total of $27 million has been budgeted for the canopies. *Ellen Sands*

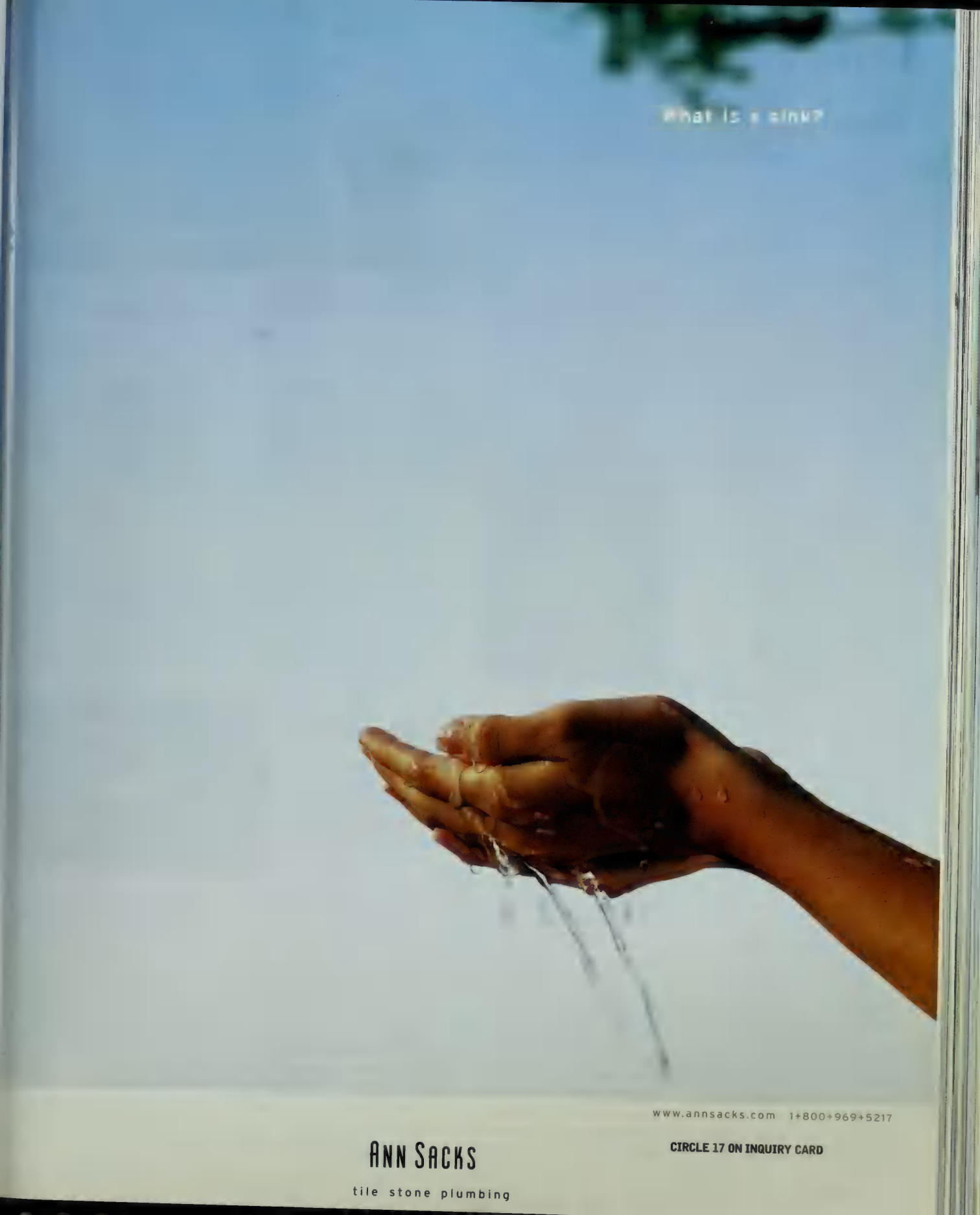
NAAB to clarify degree nomenclature, may phase out BArch by 2010

The range of professional degree programs offered by schools of architecture in the United States can be confusing: Master of Architecture (MArch), Bachelor of Architecture (BArch), five-year programs, and four-plus-two programs. In response to the confusion, the board of directors of the National Architectural Accrediting Board (NAAB) approved motions in October that may clarify professional degree nomenclature.

As of October, the NAAB will no longer accept applications for the candidacy and accreditation of new BArch programs. This change does not affect existing accredited BArch programs or programs that applied for candidacy of a BArch program before October 14.

The NAAB board is also exploring the possibility of re-accrediting only MArch programs after 2010—essentially requiring all existing BArch programs to convert to MArch. The NAAB will survey all professional degree programs in architecture to gauge the impact of accrediting only MArch programs, and it will not take any action until late 2001. This raises interesting questions. For example, what incentive would existing four-plus-two MArch programs have to maintain a six-year program when five-year MArch programs will have the same title? Would a four-plus-two MArch program be compelled to have a new degree title, such as Diploma in Architecture, to reflect a distinction from five-year MArch programs? The NAAB executive director Elliott A. Pavlos did not return calls to comment.

The NAAB board also moved to extend accreditation terms to six years from the existing five years. *JEC*



www.annsacks.com 1+800+969+5217

ANN SACKS

tile stone plumbing

CIRCLE 17 ON INQUIRY CARD

OFF THE RECORD

The U.S. General Services Administration has selected Moshe Safdie & Associates to design the headquarters for the Bureau of Alcohol, Tobacco, & Firearms, to be located at 1st Street and New York Avenue NE, in Washington, DC. Safdie won the commission over three other firms: Shalom Baranes Associates, Washington, D.C.; Pei Cobb Freed Partners, New York; and Rafael Vinoly Architects, New York.

In Gehry news: Frank O. Gehry, FAIA, received the Royal Institute of British Architects' Gold Medal. In addition, the Frank Gehry International Visiting Chair in Architectural Design was named in his honor at the University of Toronto—Canada's first visiting endowed chair in architecture. Hotel mogul Jonathan Tisch purchased a guitar designed by Gehry for $60,000 in a Democratic National Committee fund-raiser.

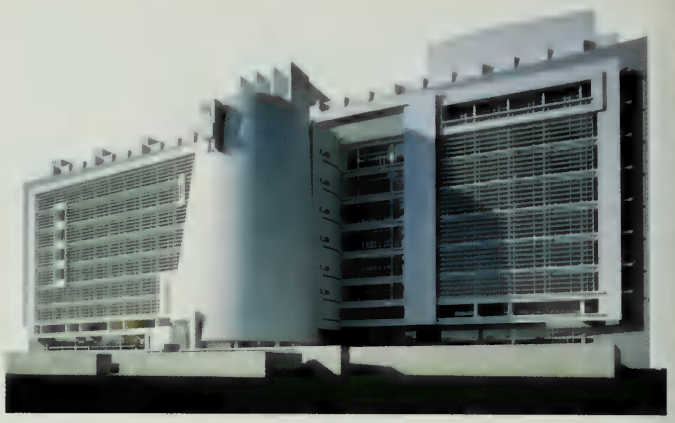
Minneapolis voters approved a plan to borrow more than $100 million to fund a new downtown library. Laurie Savran, library board president, said, "We want it to be the most exciting building in the upper Midwest."

Nancy Somerville, Hon. AIA, resigned as managing director of membership at the AIA national office to be executive vice president of the American Society of Landscape Architects (ASLA). John Ray Hoke, Jr., FAIA, resigned as publisher and editor in chief of AIA Press, and Dale Ellickson, FAIA, resigned as managing director of AIA contract documents to pursue other interests.

Mulvanny.G2 Architects of Bellevue, Wash., has been selected for two projects in China, including the Shanghai International Passenger Terminal.

Deaths: Paul Genecki, Hon. AIA, 61, former senior vice president at Victor O. Schinnerer & Company. George T. Rockwise, FAIA, 83, founder of ROMA Design Group in San Francisco.

Meier: Back on the East Coast in big way



Le Corbusier? No, it's a U.S. Courthouse and Federal Building by Richard Meier in Central Islip, N.Y. Light fills the airy, pristine interior spaces (left).

Though Richard Meier and Partners practice in New York City, Meier had become best known in recent years for West Coast work with the opening of the Getty Center in Los Angeles. Now he's back in the East in full force. Meier's most significant recent New York–area project, a $190 million United States Courthouse and Federal Building in Central Islip, N.Y., was dedicated in October.

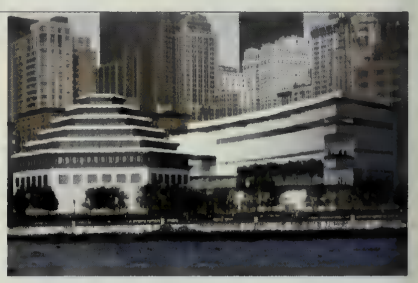
One of two federal courthouses that the architect has just completed—the other is the Sandra Day O'Connor United States Courthouse in Phoenix—the Islip building presides from a podium on a flat 29-acre site. At 12 stories high, this is one of the tallest structures on Long Island. The 735,000-square-foot building is composed of two juxtaposed volumes—a monumental rectilinear slab with 23 courtrooms and an opaque 190-foot-tall rotunda cone.



The northern and southern facades are distinct. On the north side, metal panels punched with horizontal windows define a relatively private exterior. On the plaza side, a glass curtain wall allows uninterrupted views of the Atlantic Ocean and fills corridors with natural light. The central circulation area is spatially spectacular—beginning at the front entrance into the enormous cone. Walls tilt slightly inward on the entry rotunda, and a large oculus floods light into this empty white space. A narrow security corridor leads to another colossal white atrium, where nine stories of identical catwalk corridors are stacked.

New York Times architecture critic Herbert Muschamp, in a November review, gushed over the building and over Meier: "If someone had to be the daddy in architecture today, I'm glad it's Richard Meier." *JEC and Susanna Sirefman*

Roche adds to his NYC Jewish museum



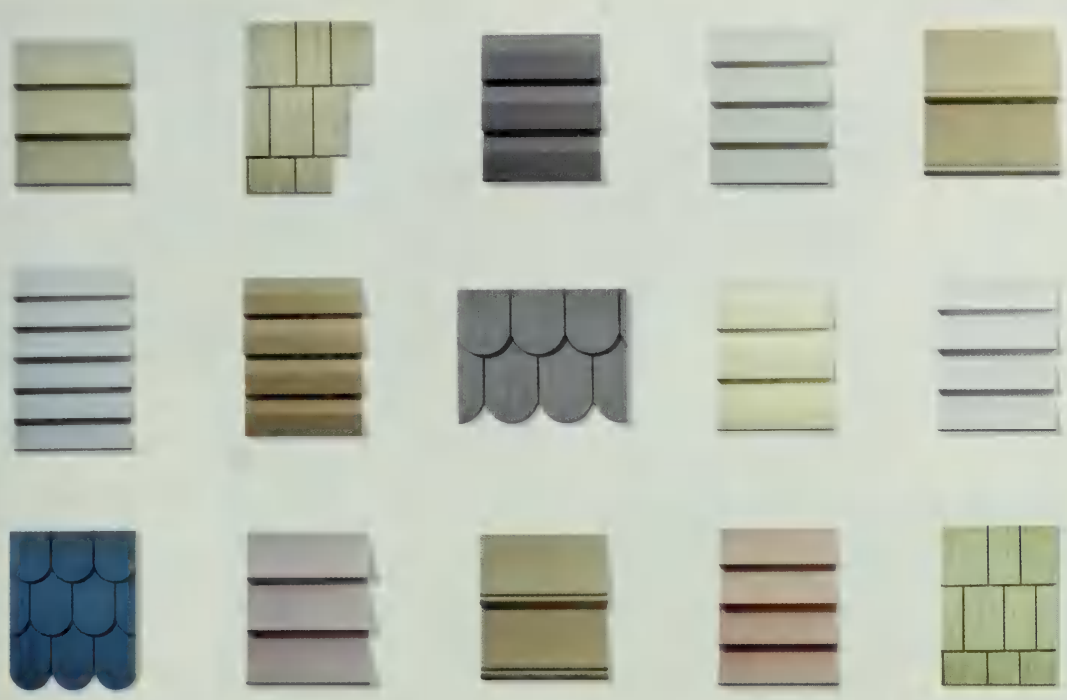
Museum projects are keeping architects busy in New York. The American Museum of Natural History opened its Rose Center by James Stewart Polshek, FAIA, earlier this year; the Museum of Modern Art has begun work on its massive expansion and temporary Queens home; and the Guggenheim awaits approval to build a Frank Gehry–designed scheme on the East River.

Not to be left behind, Manhattan's Museum of Jewish Heritage: A Living Memorial to the Holocaust held a groundbreaking ceremony in October for a $60 million expansion. The existing 30,000-square-foot building, which opened in 1997, has proven so popular that the new four-story East Wing will add more than 70,000 square feet when completed in 2003. The expansion, to be funded by the state and city, as well as by private donations, will be designed by the architect of the original Museum, Kevin Roche, FAIA, of Kevin Roche John Dinkeloo & Associates.

The addition will connect to the existing museum, which houses a core exhibition of more than 2,000 photographs and 800 historical and cultural artifacts. The new facility will widen the scope of programs, accommodating multimedia classrooms, a theater, a cafe with New York Harbor views, and administrative space. A Family History Center will serve as a repository for Steven Spielberg's Shoah Foundation testimonies—an important archive of oral histories from Holocaust survivors worldwide. A Memorial Garden overlooking the harbor is also planned.

Roche's addition could transform the existing building—a heavy, rather hostile hexagonal granite structure (left in photo above) with a six-sided roof, paying homage to both the Star of David and the six million Jews who perished in the Holocaust—into a more site-sensitive building. *SS*

PHOTOGRAPHY COURTESY RICHARD MEIER & PARTNERS (TOP AND MIDDLE)



At least the insulation is a no brainer.

Decisions. Decisions. Decisions. Selecting what looks and works best for your customers is a big part of your job. This can get a little mind-boggling considering all the choices you have out there. At least with STYROFOAM* brand insulation, your choice for rigid insulation is easy. It's the brand professionals continually choose over other comfort and energy-saving options. Not only because it's a proven performer, but also because using it results in a well-built, energy-efficient structure. So when it comes time to think about your best insulation choice, don't give it another thought. Choose BLUE†.

DOW
Styrofoam
Brand Insulation

The Preferred Choice!
www.styrofoam.com

*Trademark of The Dow Chemical Company
†The color BLUE is a Trademark of The Dow Chemical Company

CIRCLE 18 ON INQUIRY CARD

National Trust for Historic Preservation reports on why Johnny can't walk to school

The National Trust for Historic Preservation has opened a new front in the fight against sprawl. In November, the Trust released "Historic Neighborhood Schools in the Age of Sprawl: Why Johnny Can't Walk to School," a report on the threat sprawl poses to the nations' historic neighborhood schools and to the communities they anchor.

The report contends that the construction of megaschools in outlying, undeveloped land, at the expense of small, community-centered schools within walking distance of students' homes, is weakening older neighborhood vibrancy. "The trend of building shopping mall–sized schools outside of town alienates students, encourages sprawl, and impairs our sense of community," says National Trust President Richard Moe.

"Schools were once thought of as important civic landmarks to last a century," the report adds. "But many of today's newer schools resemble airplane hangars." In addition to the effect on communities, "Why Johnny Can't Walk to School" identifies hidden costs of school sprawl, including longer commutes, increased transportation expenses, and loss of students' independence.



Tacoma residents will vote in February 2001 on a bond to renovate this 1906 high school.



Cincinnati's Hoffman Public School will receive deferred maintenance funds.

In response to these threats, the National Trust's report calls for a number of changes in public policy. Chief among them is the elimination of state-mandated acreage minimums that require school sites as large as 60 acres and effectively prohibit the construction of new schools in densely populated areas. As the report points out, the acreage minimums "ignore the fact that mid-size communities might want to keep schools in town for the sake of maintaining vibrant town centers and cohesive neighborhoods." The report also recommends requiring feasibility studies to compare the costs of new school building with renovation, and it calls for the elimination of funding biases that favor new construction over renovation.

Dan Becker, a North Carolina resident fighting to save his daughter's historic school, says, "They have recycling bins in the cafeteria, and yet they were planning to cart the whole school off to the landfill."

The National Trust has also placed the general category of historic neighborhood schools on its list of America's 11 Most Endangered Historic Places and has released a new publication, *A Community Guide to Saving Schools*. *Andrew Blum*

Nearly 40 years after *The Death and Life of Great American Cities*, Jacobs accepts Scully Prize

Urbanists gathered to hear their guru speak at the National Building Museum in Washington, D.C., on November 11. There, a sold-out crowd of more than 700 urbanists saw their heroine—author Jane Jacobs—honored as the second annual recipient of the Vincent Scully Prize, awarded by the museum.

Jacobs changed the course of thought on cities and urban planning with her first book, *The Death and Life of Great American Cities* (1961), which, in the 1990s, was described by the *New York Times* as "perhaps the most influential single work in the history of planning." Her subsequent books, *The Economy of Cities* (1969) and *Cities and the Wealth of Nations* (1984), examined the impact of economic forces on cities. She was also instrumental in stopping freeway construction that would have destroyed both her neighborhood in Manhattan in the early 1960s and a neighborhood in Toronto where she moved in the late 1960s.

In the award presentation, Jacobs was honored by David Schwarz, AIA, Robert A.M. Stern, FAIA, former Toronto mayor David Crombie, and Scully. After Jacobs accepted the award, she offered her latest thoughts on North American cities and engaged Scully (right) in a discussion on urbanism moderated by Ray Suarez. In her speech, Jacobs pointed to common failures in cities that don't evolve or adapt to time and change. "Above all," she said, "my purpose is to stir up thinking about how to enlist time and change as practical allies, not as enemies that must be regulated out and fended off on the one hand and messily surrendered to on the other."

The Vincent Scully Prize recognizes exemplary practice, scholarship, or criticism in architecture, landscape architecture, historic preservation, planning, or urban design. Scully, the Sterling Professor Emeritus of the history of art at Yale University, was the initial recipient. The prize carries a $25,000 honorarium.

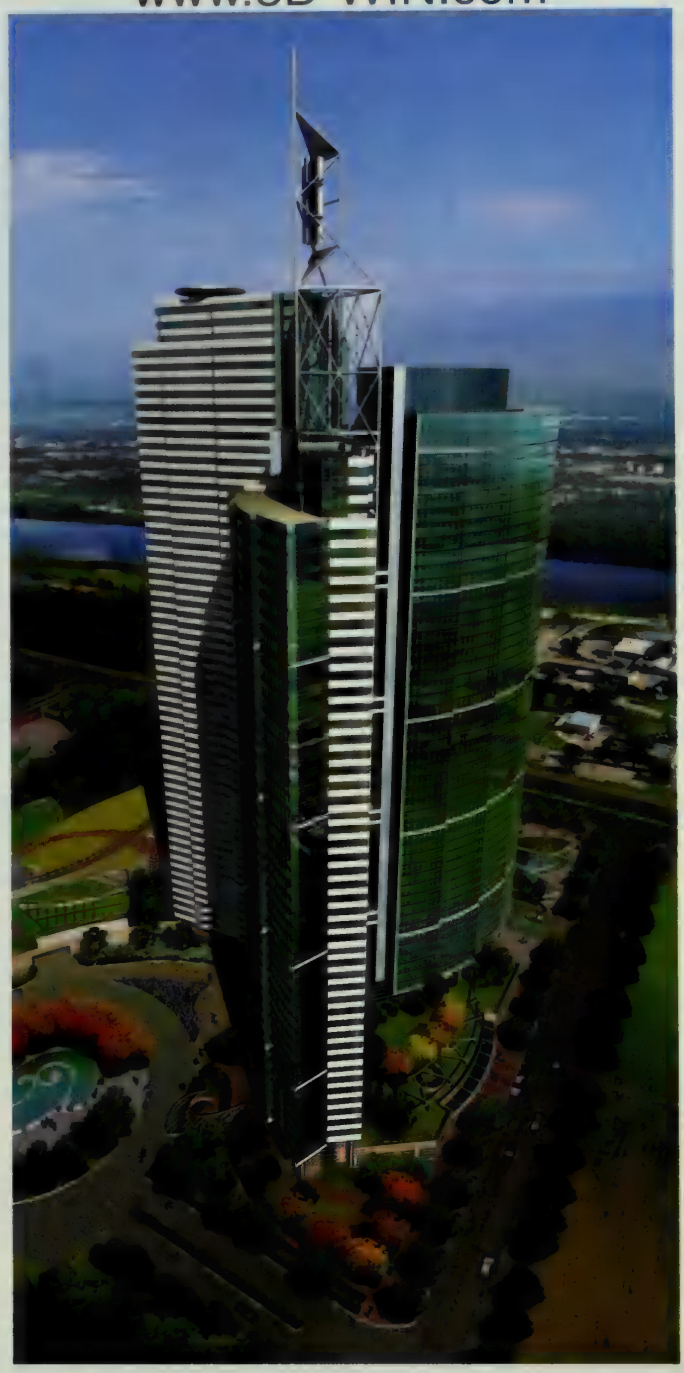


Jacobs, now in her mid-80s, does not accept just any award. In fact, she has turned down more than 30 honorary degrees, including one from Harvard University. When that was announced, Scully and Stern were all smiles. ***JEC***

PHOTOGRAPHY © CONSTANCE BEINHORN, NATIONAL TRUST FOR HISTORIC PRESERVATION (TOP); JUANITA STORK, COURTESY

See it. Feel it. Change it!

www.3D-WIN.com



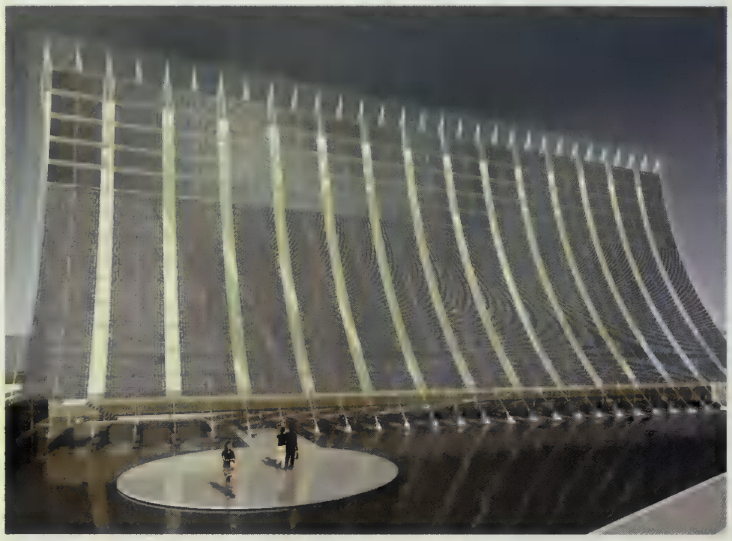
Architect: GRUZEN SAMTON

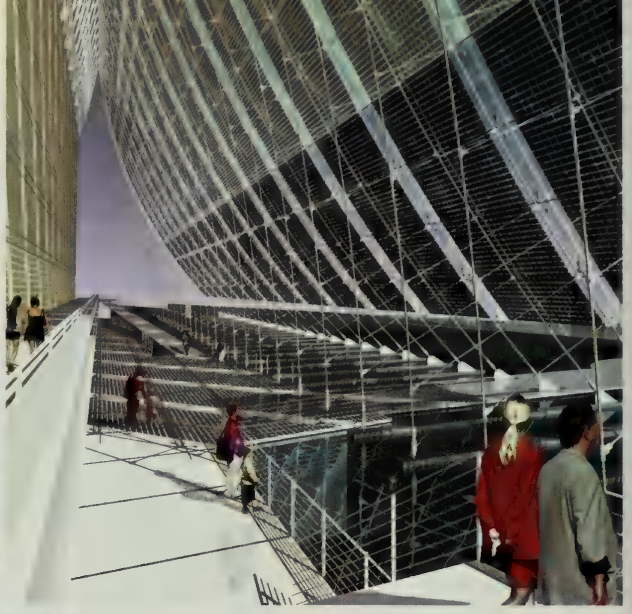
3D WIN

3D ARCHITECTURAL RENDERING
3D ANIMATION
PRESENTATION BOARD GRAPHICS

1270 Broadway, Suite 409, New York, NY 10001
Tel 1. 212. 695. 5007 Fax 1. 212. 695. 5010

CIRCLE 19 ON INQUIRY CARD





The Sun Wall competition-winning design, by Solomon Cordwell Buenz & Associates and Arup, incorporates photovoltaic panels with a solar thermal installation for hot water.

Sun Wall competition winner creates graceful wall for DOE building

Architects from Chicago's Solomon Cordwell Buenz & Associates and Arup of New York collaborated on "a sophisticated marriage of skin and structure" to win the Sun Wall design competition, sponsored jointly by the U.S. Department of Energy (DOE) and the American Institute of Architects (AIA). Energy Secretary Bill Richardson awarded the $20,000 prize to the winning team in an October 13 ceremony at the DOE in Washington.

More than 115 contestants attempted to design a solar-generating installation that made productive use of a 32,100-square-foot wall area on the south-facing facade of the DOE's massive concrete Forrestal headquarters building. This would be the largest solar energy system in a federal government building. The site is currently a parking lot.

The winning design was completed by Martin Wolf, FAIA, Mark Frisch, AIA, Devon Patterson, AIA, and Duane Carter of Solomon Cordwell Buenz & Associates, and by Mahadev Ramon and David Scott of Arup. Their solution is a concave sweep of solar panels supported by tension trusses that span between the existing south wall and the reconfigured landscape. "Our approach was to accept the challenge of integrating solar technology as a design element," says Wolf, a Solomon Cordwell Buenz senior vice president and design principal. "Why not make a curtain wall or a glass roof out of it? When you explore its true potential, solar design can be exhilarating."

Impetus for the design evolved from technical considerations. The concave shape is most conducive to responding to changes in the angle of the sun's rays through the seasons. A photovoltaic array is positioned along the lower two-thirds of the wall to collect the more vertical summer sun and produce electricity for air-conditioning. Solar thermal panels are positioned more vertically at the top of the wall, where they will capture the more horizontal rays of the winter sun. A pool in front of the wall will cool summer air to prevent superheating behind the wall.

Actual construction may take a while. The National Capital Planning Commission and the Commission of Fine Arts in Washington, D.C., must approve the design. Funding approval from Congress is needed, expected no earlier than spring 2001. *Karen Haas Martin*

Practice lessons for a small crowd at "Form! Function! Future!"

The challenges are immense, the choices many, and the possibilities endless in the practice of architecture. That was the message to take home from "Form! Function! Future!," a professional practice conference in Portland, Ore., sponsored by the American Institute of Architects (AIA), October 15–17. The conference offered tools for harnessing technology, exploring new definitions of practice, and surviving the pressures of a fast-paced, booming economy, but there weren't many takers. Most AIA members were too busy managing their own burgeoning workloads. Attendance, at 250, was approximately half the 500 people expected.

Design for workplace performance got high billing. Alcoa chairman and director Paul O'Neill and architect Martin Powell, AIA, of the Design Alliance in Pittsburgh told both sides of their story of close collaboration on the design of the celebrated Alcoa Corporate Headquarters in Pittsburgh. Along with O'Neill's leadership, the new facility has made Alcoa, an American industrial icon, the image of fast company growth and civic responsibility.

Judging by attendance and the titles of breakout sessions, one would think that the future of the profession belongs to facilities managers, who want to expand the definition of practice within the AIA, stretching it further into strategic planning and capital management. "Architects have done a great job of restricting their scope of services over the years," said corporate facilities manager Rod Stevens, who led one of the sessions. "People believe that all we do is design buildings."

"Architecture is only the effect it has on people," said longtime facilities manager and futurist Robbie Cook in one well-attended session. He suggested that architects take a cue from the late Buckminster Fuller, who claimed, as his own goal, nothing less than "making man a success." *Clair Enlow*



Dens-Shield® Outperforms Cement Board and Makes Your Job Easier, Too.

Dens-Shield®	Cement Board
▪ Weighs from 15lbs to 32lbs less per panel	• Heavy, hard to handle
▪ Surface moisture barrier protects tile installation and wall cavity	• Needs moisture barrier to protect wall cavity
▪ Easy and fast to score and snap with standard utility knife	• Hard to cut, requires special tools
▪ Cut-outs are simple and clean	• Cutting leaves crumbly, uneven edges
▪ Fastens close to edge; easy to apply to studs	• Broken spalled edges make fastening difficult
▪ Leaves no messy grit or abrasive residue	• Cement grit can scratch and damage tubs and sinks

Dens-Shield® THE ULTIMATE™ TILE BACKER

Georgia-Pacific

20 YEAR LIMITED WARRANTY

For a Professional Tile Installation
Engineered for use on walls, floors, countertops and ceilings

For immediate technical information call 1-800-225-6119

United States toll-free
Midwest 1-800-876-4746
South 1-800-327-2344
Northeast 1-800-947-4497
West 1-800-824-7503

Canada toll-free
Phone 1-800-387-6823
Fax 1-800-387-8975
French 1-800-361-0486

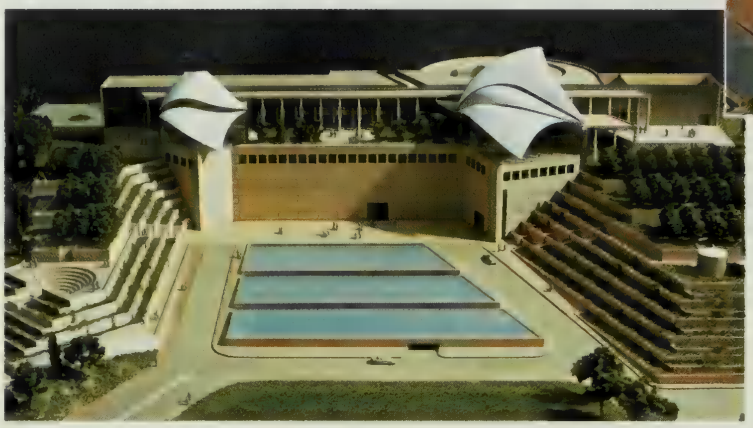
or visit our website at www.gp.com/gypsum

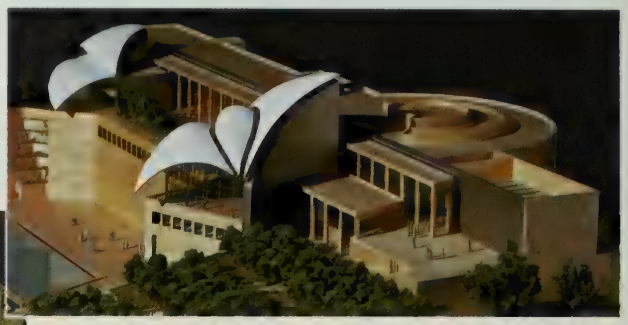
Georgia-Pacific
133 Peachtree Street, NE
Atlanta, GA 30303

©2000 Georgia-Pacific Corporation. All rights reserved. DENS-SHIELD is a registered trademark and THE ULTIMATE TILE BACKER is a trademark of Georgia-Pacific Corporation. Durock is a registered trademark of United States Gypsum Corporation. Printed in the USA 6/00. COL Literature Item #102355.

CIRCLE 20 ON INQUIRY CARD

Safdie's Yitzhak Rabin Center in Tel Aviv built atop an emergency power station





The Yitzhak Rabin Center for Israel Studies will house the Rabin archives, a research and educational institute, and a museum.

Construction began this fall on the Yitzhak Rabin Center for Israel Studies, designed by Moshe Safdie, FAIA. The center includes a museum documenting the life of the slain Israeli leader.

Fittingly, the Tel Aviv complex—with dovelike winged roof structures—is to be built atop a former wartime emergency power station. Located near three other museums and Tel Aviv University, the three-story, 129,000-square-foot complex will also house the Rabin archives, a research and educational institute focusing on Israel studies, and a great hall and auditorium. The power station—a series of five-story-tall underground chambers—is built into an escarpment. Safdie is exposing the station's southern side, which overlooks the Yarkon River, Tel Aviv, and the Mediterranean Sea. The massive base of the earth-colored rectangular building is "an extension of the land form," Safdie says. The cladding is mainly acid-etched precast concrete and lead-coated copper. In contrast, the walls of the great rooms are glass and their floating roof structures are white ferrocement, symbolizing hope. Two terraced gardens, one named for President Bill Clinton and the other for the late King Hussein of Jordan, Rabin's partners in peace, flank the center. Finding an alternate site for the power company held up the project for months. Construction will be complete in 2003.

Safdie received the commission for the $26 million project shortly after Rabin's assassination in November 1995; he was also asked by Rabin's family and close friends to design the slain leader's tomb. *Esther Hecht*

Catalano house in danger of demolition

Eduardo Catalano's 1954 house in Raleigh, N.C., crystallized the ideals of Modernism for a generation of designers, but today it is in danger of demolition. A tour de force of science meets modern design, the house is now in a state of disrepair.

The roof, which really is the house itself, has deteriorated to the point that the city has declared the Catalano House an unsafe building. Preservation North Carolina, fending off demolition, has optioned the property and is actively seeking a buyer to reconstruct it.

Argentinian-born Catalano built the house himself shortly after he was recruited to teach architecture at Henry Kamphoefner's Bauhaus-inspired School of Design at North Carolina State College. His hyperbolic, paraboloid-roofed dwelling was built with startling simplicity on a suburban lot and seemed the perfect marriage of form and structure. The graceful double-curved shell, constructed of three layers of ¾-inch wood flooring, stretches 87 feet from point to point. The roof shell was vulnerable to water and was never perfected or maintained. Rot set in. In recent years, the roof has moved so much that it lifted the exterior walls off the concrete floor.

Beneath the roof, Catalano enclosed a 1,200-square-foot living space with panels of glass. The result was a space that flowed from cavelike intimacy near the roof's low points to great transparency at its peaks. The house earned rare praise from Frank Lloyd Wright and became *House and Home* magazine's House of the Decade. It merited one of 220 building profiles in the *Whitney Guide to 20th-Century American Architecture*, which notes, "Catalano's astonishing house appears to be all roof, nothing more than a large glider that has drifted into the forest."



Catalano outside the house he designed and built in 1954, now in disrepair.

Now 83 and living in Cambridge, Mass., Catalano recalls the house as an example of his penchant for exploring mathematical and natural ideals and pushing the limits of a design system. Catalano does want the house saved or reconstructed.

Preservation North Carolina recently negotiated an option to buy the Catalano House and sell it for $360,000 to anyone willing to save it in any way. However, reconstruction—the house is beyond the point of renovation—may cost $1 million or more. An alternative proposal to reconstruct the roof and podium as an outdoor pavilion on the grounds of the nearby North Carolina Museum of Art would, Catalano believes, "capture the spirit of the house." *Ken Friedlien*

PHOTOGRAPHY COURTESY YOSEF SHOSHAN ASSOCIATES; KAREN TAM, COURTESY RALEIGH NEWS & OBSERVER



Products:
EFCO TerraStile™ Door and Frame, Series 810 and 510 Fixed Windows, Series 3500 Sliding Windows, System 403 Storefront, Series 5600 Curtain Wall, and D-300 Doors

Building:
Golf World Resort and Convention Center, St. Augustine, FL

Architect:
Gould Evans Goodman Associates

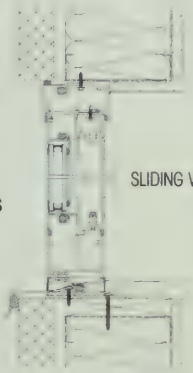
Erector:
Cartner Glass Systems, Inc.

COMPATIBLE

LOOK TO EFCO® FOR A COMPLETE LINE OF COMPATIBLE GLAZING SYSTEMS FROM A SINGLE SOURCE.

Many products, one manufacturer. It's the perfect way to ensure that all of your glazing systems will combine effortlessly.

With EFCO, you can choose from an extensive line, including windows, storefronts, entrances, and curtain walls. We'll custom-build your systems to coordinate flawlessly with each other—from matching paint colors and finishes to easy installation. And project coordination is easier too, since you're working with a single manufacturer.



SLIDING WINDOW

Best of all, you don't have to sacrifice quality for compatibility. Every EFCO product will perform to the highest standards. To find out more, talk to your EFCO representative, call EFCO direct at 1-800-221-4169, or visit our Web site at www.efcocorp.com.



EFCO

WINDOWS
CURTAIN WALLS
ENTRANCES
STOREFRONTS

CIRCLE 21 ON INQUIRY CARD

©1999 EFCO Corporation

Conference at MoMA explores marriage of theory and practice in architecture

For some time the architectural community has been lamenting the widening gap between theory, especially poststructuralism, and practice [MARCH 1998, page 64]. Now with the increasing globalization of capitalism, more and more architects and academics are addressing the situation, as Michael Speaks notes (see page 74). One clear manifestation of this concern was the sold-out conference "Things in the Making: Contemporary Architecture and the Pragmatist Imagination," held on November 10–11 at New York's Museum of Modern Art.



Cornel West, Rem Koolhaas, Peter Eisenman, and Richard Rorty (clockwise from top left).

Organized by Joan Ockman, director of Columbia's Buell Center, and Terence Riley, MoMA's chief curator of architecture and design, the conference explored ways in which American pragmatism provides a direction for architectural theorists and practitioners.

Pragmatism, a philosophical approach named by Charles S. Pierce in the late 19th century and resuscitated over the last 30 years by Richard Rorty, of Stanford University, and Cornel West, of Harvard University, was once blamed for America's instrumentalist ethos. It placed too much emphasis on doing, and not enough on questioning how we think and know. As West has written, however, pragmatism should not be judged as a philosophy, but more as "continuous cultural commentary . . . that attempts to explain America to itself at a particular historical moment."

Pragmatically speaking, the conference could have been done in half a day, limited to headline attractions Peter Eisenman and Richard Rorty, and to Cornel West and Rem Koolhaas. Stan Allen offered the best summation of pragmatism's attraction, using his own experience as an architect and theorist to elucidate the issues. These five presenters cut to the chase in ways other theorists and architects were not able to do.

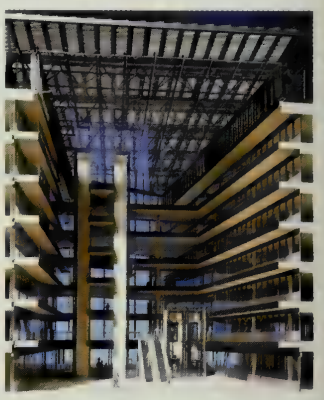
It should be said, however, that in both the Eisenman/Rorty and West/Koolhaas interactions, one came away with a feeling of watching extreme wrestling between the architects versus the philosophers. In this particular combat, the match between Eisenman and Rorty was spirited and somewhat trenchant, but with no clear winners. Rorty would not play the game that Eisenman tried to set up, which involved use of upmarket theory words such as "criticality." In the round between West and Koolhaas, Koolhaas walked into every trap that West set, causing West to verbally alternate between stomping and pirouetting.

What came out of all this display? Go to www.architecturalrecord.com to find out more about the conference. *Suzanne Stephens*

KPF's first project in Spain is energy-savvy

While the most technically advanced office buildings in Europe are known for their double-skin ventilated curtain walls, among other attributes, the upcoming headquarters for a major utility company in Madrid will have a sophisticated skin on its roof. Construction recently began on the headquarters of Endesa, one of Spain's largest electricity producers, by the London office of Kohn Pedersen Fox Associates (KPF). Located in the Campo de las Naciones business park near Madrid's Barajas airport, this is KPF's first project in Spain.

The Endesa building's central atrium will be topped by a transparent roof incorporating a field of photovoltaic cells and systems of passive ventilation and temperature control. Designed without air-conditioning, the central atrium is conceived as a thermal buffer between outdoor and indoor air temperatures. Seventeen trusses will span the central atrium, and a secondary framework of prefabricated rectangular frames will support an interior surface of clear glass. On top, an array of solar panels will cover an area of 86,000 square feet—the largest installation of its kind in Europe. The panels will supply supplementary electric power to the building and provide low-angle sun shading. Below the internal glazing, a secondary system of motorized, frameless glass louvers will induce natural air flow and fresh-air infiltration at the top of the atrium. Thus, the design meets the client's appropriate wish to create a landmark model of energy-conservation techniques.



Courtyard roof of photovoltaic cells

The building accommodates 375,000 square feet of office space on five floors and underground parking for 1,000 cars. KPF's design was chosen in a limited competition over submissions by Foster and Partners, the Richard Rogers Partnership, and HOK International—all of London. The project is being executed in association with local architect Rafael de La-Hoz, son of the well-known Madrid architect of the same name, now deceased. *David Cohn*



Endesa, implementing passive ventilation, is designed without air-conditioning.

Michelangelo

Advent

Monet

Not every work of art comes in a frame.

A palette of metal finishes to define the form. A myriad of colors to compliment any decor. With Advent, you create the masterpiece. (Frame not included).

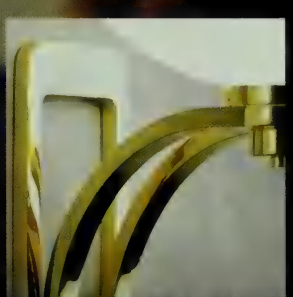
For a complete specification grade architectural lighting catalog featuring our finishes brochure, please contact us at 262-242-1420 or spi@spilighting.com



ed traditional
trim ring



Rolled accent ring



Cast metal back plate and arm

SPI Lighting Group

SPI
Advent

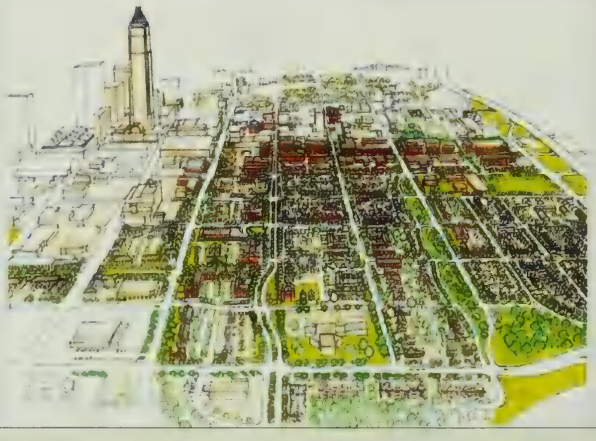
c UL us
LISTED

CIRCLE 22 ON INQUIRY CARD

AIA/HUD Secretary's Housing and Community Design Awards 2000 recognize the best in residential housing design

MIXED USE/INCOME

The award recognizes projects that revitalize neighborhoods through a combination of residential and non-residential uses, and market-rate and subsidized housing. First Ward Place provides a framework for developing a new district that combines housing, shops, businesses, and institutions. Vermont Village proves that affordable home ownership is the key to neighborhood revitalization.



Project: *First Ward Place, Charlotte*
Architect: *Urban Design Associates—Ray Gindroz, FAIA (managing principal); Paul Ostergaard, AIA, Barry Long, AIA (principals); Donald Kaliszewski, AIA, James Morgan, AIA (associates)*
Client: *City of Charlotte, the Charlotte Housing Authority*

COMMUNITY BUILDING BY DESIGN

The award honors projects that rebuild poor neighborhoods. Portland Public Market succeeded in converting an uninviting parking lot into a community center, with booths for farmers who sell locally produced goods. Orchard Gardens, a Hope VI development, integrates mixed-income units into an urban fabric of commercial/retail and residential neighborhoods.



Project: *Portland Public Market, Portland, Maine*
Architect: *Hugh A. Boyd Architects—Hugh A. Boyd, AIA (principal-in-charge); Amy H. Boyd (principal)*
Associate architect: *Orcutt Associates—John R. Orcutt (principal-in-charge); Cynthia Plank Orcutt (landscape architect); Gary Coccoluto, Mathew G. Winch (project architects)*
Client: *Libra Foundation*
Lighting design: *The Lighting Practice*

ALLEN J. ROTHMAN HOUSING ACCESSIBILITY

In honor of HUD's late senior policy analyst, who devoted his life to improving housing accessibility for the disabled. The Leland Apartments were designed with the added challenge of incorporating input from various government agencies. The complex blends affordability and accessibility, and provides an urban streetscape as stylish as any market-rate housing in the area.



"Always design a thing by considering it in its next larger context—a chair in a room, a room in a house, a house in an environment, an environment in a city plan," said Eliel Saarinen. The AIA's Center for Livable Communities Housing Professional Interest Area, in partnership with Housing and Urban Development Secretary Andrew Cuomo, made context a priority when choosing the winners of the Community Design Awards this year. Selected for their innovative, affordable, and accessible building designs (not to mention great aesthetic expression), the five award winners demonstrate that good design can revitalize communities and improve people's lives.



Project: *Vermont Village Plaza, Los Angeles*
Architect: *Solomon E.T.C. Architecture and Urban Design—Dan Solomon, FAIA (principal); Anne Torney (project architect); Marcos Ancinas, Owen Kennerly, Thai Nguyen, Martha Marinez, Gabriel Ruspini, Jose Villegas (project team)*
Contractor: *Windjammer Construction*
Landscape architect: *Caleb Development Corp.*



Project: *Orchard Gardens, Roxbury, Mass.*
Architect: *Domenech Hicks & Krockmalnic Architects—Fernando J. Domenech, Jr., AIA, Alberto Cardenas, AIA, Marya Piasecki*
Client: *Madison-Trinity Ltd. Partnership, Adams-Orchard Ltd. Partnership, Boston Housing Authority*
Engineer: *Judith Nitsch Engineering (civil); Weidlinger Assoc. (structural); SAR Engineering (MEP)*



Project: *Leland Apartments, San Francisco*
Architect: *Kwan Henmi Architecture Planning—Denis Henmi, AIA (principal-in-charge); Kiyoshi Matsuo, AIA (project manager); Joseph Chance, AIA (project designer); John Tam (project architect)*
Client: *TODCO, San Francisco*
General contractor: *Cahill Construction*
Engineer: *Santos Urrutia (structural); FW Associates (electrical); Bill Mah & Associates (MEP)*







AHHH, ECO FLOOR.

For every action...satisfaction.
It's what you get from ECOsurfaces.
Every year, we turn over 45 million pounds of
old tires into the highest grade of rubber flooring.
It's our Xtreme Recycled technology.
Choose from a kaleidoscopic range of color.
Indoor, outdoor, any floor.
Durable. Different. No skidding.
Great for the environment. For any environment.

ECOsurfaces
Manufactured by Dodge-Regupol, Inc.
Distributed by Gerbert Limited
1-877-ECO-SURF or www.regupol.com
for a response that just might floor you!

THE WORLD LEADER IN XTREME RECYCLED RUBBER

CIRCLE 23 ON INQUIRY CARD

News Briefs

Reach the AIA at www.aia.org The American Institute of Architects (AIA) is developing a new members-only Web site to debut in January. The AIA's contract with Telebuild, which operated the Web site www.e-architect.com, ended on November 18 and that site will not be updated. In the interim, the AIA will provide Web services and information at www.aia.org.

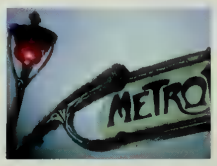
Yoko, Utopia, and Wright The New York husband-and-wife team of Tim Culbert and Celia Imrey, Inline Studio, has designed a number of Manhattan exhibitions, including *Yes: Yoko Ono*, an exhibition of the artwork of York Ono, on view at the Japan Society through January 14. *Utopia: The Search for the Ideal Society in the Western World* is at the New York Public Library through January 27. Inline Studio is currently working on an exhibition on Frank Lloyd Wright's work in Japan, to open at the Japan Society in March.

Predock's first public building in the Northeast The Tang Teaching Museum and Art Gallery, the first public building in the Northeast by Antoine Predock, FAIA, opened at Skidmore College in Saratoga Springs, N.Y. in October. The $10.2 million, 39,000-square-foot building includes galleries, a 150-seat interdisciplinary space, and classrooms. The first art museum in Saratoga Springs, the Tang is composed of split-face block, metal, and concrete. The building sits at a crossroads on the Skidmore campus but does not interrupt pedestrian paths—a 140-foot steel staircase and a 120-foot concrete staircase literally cross over the building.



***Utopia* at the New York Public Library**

Art Nouveau in D.C. Art Nouveau enthusiasts have until January 28 to go to the National Gallery of Art in Washington, D.C., to see the largest and most comprehensive exhibition ever organized on the subject. *Art Nouveau, 1890–1914,* has more than 350 pieces, including furniture, sculpture, paintings, graphics, and textiles on two floors of I.M. Pei's East Wing. The show is organized around various cities, with items from Paris, Brussels, Glasgow, Vienna, Munich, Turin, New York, and Chicago. An original 1898 Paris Métropolitain entrance by Hector Guimard is in the exhibit and will be permanently installed in the National Gallery of Art's Sculpture Garden in late 2001.



Guimard's Métropolitain

Latrobe Fellowship launched The College of Fellows of the American Institute of Architects has announced a new biannual fellowship. The Latrobe Fellowship offers a $50,000 stipend for research documented in publications, exhibitions, or educational programming that will inform, educate, and provide new insights for the architectural profession. Applications, available at www.aia.org, are due March 1. Recipients will be notified by April 15.



Tang Teaching Museum and Gallery

News Briefs



On the job at Sears, Roebuck, Chicago, 1913

On the Job on exhibit The American office is celebrated and examined in the exhibition *On the Job: Design and the American Office*, through August 19, 2001, at the National Building Museum in Washington, D.C. The exhibition focuses on the physical changes in American offices throughout the 20th century, as well as the cultural shifts that have accompanied these workplace transformations.

Decker curates NBM Howard Decker, FAIA, was named chief curator of the National Building Museum in Washington, D.C., in October. Decker will lead the planning of temporary exhibitions, as well as *Building America*, which is the museum's planned core exhibition. A founding principal of DLK Architecture in Chicago, Decker was named Outstanding Young Architect of the Year by AIA Chicago in 1988. His firm won the AIA Chicago Firm of the Year Award in 1991.



Decker

Anderson begins term as 2001 AIA president John D. Anderson, FAIA, began his term as 2001 president of the American Institute of Architects on December 2. Anderson is a founding principal of Denver-based Anderson Mason Dale. Gordon Chong, FAIA, began his term as AIA first vice president/president-elect. Vice presidents for 2001 are Terrance Brown, FAIA, Barbara Nadel, FAIA, and Douglas Steidl, FAIA. Stephen Castellanos, FAIA, is 2001 AIA secretary.

Eyebeam Atelier narrows list for museum project Eyebeam Atelier, a nonprofit media organization based in New York, has pared down a short list of architects for a 90,000-square-foot museum of art and technology to open in the Chelsea District of Manhattan in 2004. The list is down from 30 firms to 15: Architecture Research Office, Asymptote Architecture, David Chipperfield Architects, Preston Scott Cohen, Neil Denari Architects, Diller and Scofidio, Foreign Office Architects, Greg Lynn FORM, Gluckman Mayner Architects, Steven Holl Architects, Leeser Architecture, MVRDV, Resier+Umemoto RUR Architecture, Roger/Marvel Architects, UN Studio. The 15 firms developed conceptual designs that will be exhibited at Eyebeam Atelier beginning on December 15 . Three firms will be selected in January to develop schematic designs. A winning architecture firm will be chosen in May.

Philly fights blight Philadelphia Mayor John Street has presented an outline for a $250 million anti-blight program in his city. The Neighborhood Transformation Initiative, presented to Philadelphia City Council November 1, calls for $130 million to tear down buildings deemed in danger of immediate collapse, $40 million to demolish scattered residential buildings, $20 million to tear down blighted commercial and industrial structures, $55 million for home-improvement loans and property acquisitions, and $5 million for a computerized inventory system to track the program.

The program calls for demolition of 12,000 blighted buildings, and neighborhood-based blight-removal plans will be integrated into a citywide plan.



Modern Masters of Architectural Timbers

The G.R. Plume Company sets the standard for integrating the beauty of natural wood into today's architecture. Our masterful architectural timbers grace distinctive homes and businesses around the world. We provide beautiful and ingenious solutions, insightful collaborations, and a thorough understanding of wood and its applications. Our twenty years of creative and technical woodworking expertise can help you realize your architectural vision. For more information,

call (360) 384-2800.



THE G.R. PLUME COMPANY
ARCHITECTURAL TIMBER DIVISION

CIRCLE 24 ON INQUIRY CARD

BPB Celotex

Great news for everyone in the industry...





...except our competitors.

Announcing the ultimate partnership of high tech and high touch: BPB Celotex, a powerful new force in the interior finishes industry.

BPB Celotex For Walls
The first-rate Celotex gypsum board you've used for years is better than ever. Now, because of our access to 90 plants in 45 countries around the world, we benchmark the best manufacturing practices to continually improve our quality and service. For you, that means a more consistent and wider product line, and assured supply.



BPB Celotex For Ceilings
Whether your design requirements are aesthetic beauty, acoustical performance or durability, the reputation of Celotex and Capaul are well-known for their unmatched and distinctive ceiling solutions.

BPB Celotex For Answers
You'll find the same friendly voice on the phone to take your orders. And, for technical assistance, installation advice, product inquiries and more, our Customer Response Center stands ready to help.

From product to service, we make it easy to work with us. Now, how can we make your life easier?

BPB Celotex®

For Walls. For Ceilings. For Answers.
1-800-CELOTEX
www.bpb-celotex.com
CIRCLE 25 ON INQUIRY CARD

Both patterns are guaranteed for a lifetime.



CHAMELEON Lifetime Warranty COLLECTION

C/S, the inventor of modern wall protection, breaks the mold once again. Introducing The Acrovyn Chameleon Collection, the only patterned wall protection guaranteed for a lifetime. That's right, a lifetime! Because we've developed a proprietary fusion bonded technology that seals the pattern inside the protection. The Acrovyn Chameleon Collection, another reason nothing else is Acrovyn. For more information, call **1-888-621-5544** or visit **www.c-sgroup.com**.

C/S Acrovyn® Chameleon Collection™

CIRCLE 26 ON INQUIRY CARD

San Diego's innovative housing awakens a once-sleepy city

Correspondent's File

By David Hay

To look at San Diego today, it's hard to believe that this was once a sleepy beach city with a resolutely suburban ethos. In downtown, cranes swing high above almost every corner—one of many signs of a building boom. San Diego is busy transforming itself into a dense metropolis.

San Diego's urbanization is unlike that of other West Coast cities, such as Seattle, where the emphasis is on business developments. In San Diego, a sometimes fractious coalition of developers, city planners, architects, and residents all agree that their new downtown should be primarily residential.

According to Walter Rask, manager of architecture and planning at San Diego's Center City Development Corporation, 75 percent of new construction in downtown San Diego this year is in housing units. More than 4,000 units are being built or planned.

Building careers in San Diego

Over the last 20 years, a number of architects recognized for their innovative approaches to housing have built their careers in San Diego. Their passion for urbanism led to design that embraced the street instead of catering to the automobile. They've designed townhouses—a building type that was unheard of in San Diego only a few years ago. The smaller scale of San Diego—its blocks are usually only 200 by 300—inspired them to push the boundaries of interior space with small unit sizes. Coupled with the warm climate, their new buildings offer abundant indoor-outdoor opportunities. All this, they believe, has contributed to built work that promotes a real sense of community.

This vision by local architects is quite distinct from that of the out-of-town and Canadian developers operating here. Plans by outside developers show standard models for their residential high-rises, emphasizing an anonymous life above the street rather than an engaged streetlife. Downtown's Marina neighborhood, where some of these buildings have already been built, resembles a ghost town at street level.

One transformed block

In contrast, the most innovative urban statement by the loose-knit San Diego school of architects is on one block in the Little Italy neighborhood [MARCH 1999, page 80]. Here, seven architects have built separate, urbane forms of housing. A three-story, nine-unit miniloft building called the Merrimac, by Smith and Others in collaboration with Lloyd Russell, is particularly innovative. Units have 26-foot-tall windows extending down from a slightly concave roof. The epitome of the "anti-condo," the Merrimac does not have underground parking or interior elevators. Rather, it boasts shared stairs and walks and common doors between lofts. Only 400 square feet each, the lofts have elevated ceilings, some as high as 20 feet, which make them appear larger.

The biggest building on this block is a 44-unit development of market-rate and low-income rental housing designed by Rob Wellington Quigley, FAIA, and completed in 1999. Catering more to the dictates of its developer, the building has standard corridors and elevators, as well as upper-level walls that tilt streetward in an engaging fashion. "This whole block is a textbook project in so many ways," says Quigley. "The more personalities you have on the street, the more urban the feel and the more vitality that's produced."

The new buildings appeal to the younger San Diegans drawn into downtown by the city's burgeoning Internet economy. DeFreitas deSign, however, created "3 in a ROWhomes," on Tenth Avenue and F Street, to encourage families to move back to the city. Completed in summer 1999, these 1,850-square-foot townhouses by Kevin deFreitas have 14-foot-tall front windows and offer a sense of openness rarely associated with houses on the city's tiny blocks. The stick-frame houses are built on a concrete slab, with wood floors on the second and third levels.

The housing solutions on this Little Italy block, however, are mostly too small in scale to satisfy



New housing in San Diego's Little Italy includes (clockwise from above) the Merrimac by Smith and Others with Lloyd Russell, a market-rate and low-income development by Rob Quigley, and three townhouses by deFreitas deSign.

David Hay is a Los Angeles–based writer on architecture and the arts.

the demands of today's booming market. Thus, members of the San Diego school are obtaining larger commissions.

For instance, when complete in summer 2001, deFreitas' latest project, "ROWhomes on F," will have 17 stand-alone townhouses built out of precast concrete panels. The homes range from 1,100 to 2,000 square feet and will be visually consistent but structurally independent units, standing two inches apart. To fit the lot, deFreitas designed the units to be only 16 feet wide. The two-bedroom units have roof decks, and many feature what urbanists insist on: stoops to the street. "This seems so revolutionary in San Diego but it's the oldest idea in the book," admits deFreitas.

Construction has begun on the U.S.S. Essex, a 42-unit expansion by Smith and Others with Lloyd Russell, who also worked on the Merrimac minilofts. The development's parking deck will resemble the deck of a World War II class of aircraft carriers called the Essex. The units, to be completed in late 2001, are free-form lofts with exposed materials and scale exaggerated by oversize windows and high ceilings.

More personalities

Rob Quigley faced a big challenge to his philosophy of urbanism—the more personalities involved in the design the better—with his 151-unit Marina Place complex, to open in 2001. "I recommended they make it into a joint project with another architect," he said. The developer, however, balked and chose Quigley as the sole architect. So Quigley broke the project into four highly individuated structures. One structure curves like a snake through the interior of the block, partly to avoid an earthquake fault on the site. The result is a diverse stock of housing: walk-up townhouses, loft-style apartments, and traditional one-bedroom units on the upper floors.



"ROWhomes on F" by deFreitas deSign are 17 structurally independent units.

Another architect attacking the "mentality of one idea on one city block" is Frank Wolden of Carrier-Johnson. With a large, 326-condominium complex called Treo set to open in late 2002, Wolden created his own version of the Little Italy development. "We deliberately broke it down into smaller elements," he says. The 24-story high-rise tower is joined to a stepped-slab building, where the uppermost floors feature glass-walled lofts. The movement created by this cascading roofline contrasts well with the tilting roofs on the small-scale apartment buildings that meander through the project's center. In front of the tower are townhouses standing flush to the sidewalk with stoops.

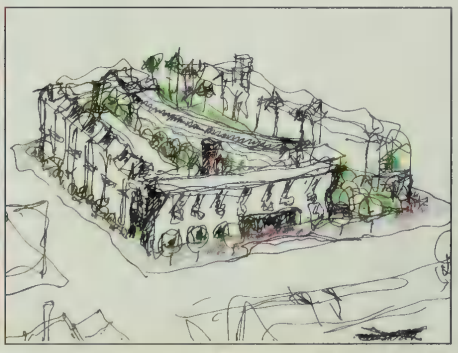
One developer that has been responsive to what is happening in a more urbane San Diego is the ownership of the San Diego Padres baseball team. The Padres chose the underdeveloped East Village area as the site for its new 46,000-seat ballpark, designed by Antoine Predock, FAIA. The Padres' development effort does not stop with the stadium, though. "We wanted to tie this park into larger developments in this neighborhood," says Eric Jutson, the team's director of ballpark planning. Among these developments are 750,000 square feet of office space and, of course, new parking. Construction on the ballpark has been suspended since October, though, and will not resume until a financing plan is set.

Mixing parking with housing

Among the more novel housing designs for San Diego's East Village are plans by Studio E Architects to wrap two 1,000-car, parking structures with condominiums. Architects Eric Nasland, AIA, Bradley Burke, and John Sheehan have designed the garage to feature 42 loft-style units at one end and a 200-room hotel at the other.

In this maelstrom of city building, it is fitting that the city is being shaped by the work of its own homegrown urbanists. Perhaps these architects' collective passion for a humanistic downtown will have a positive impact on the city that they have worked so long to make livable. ■





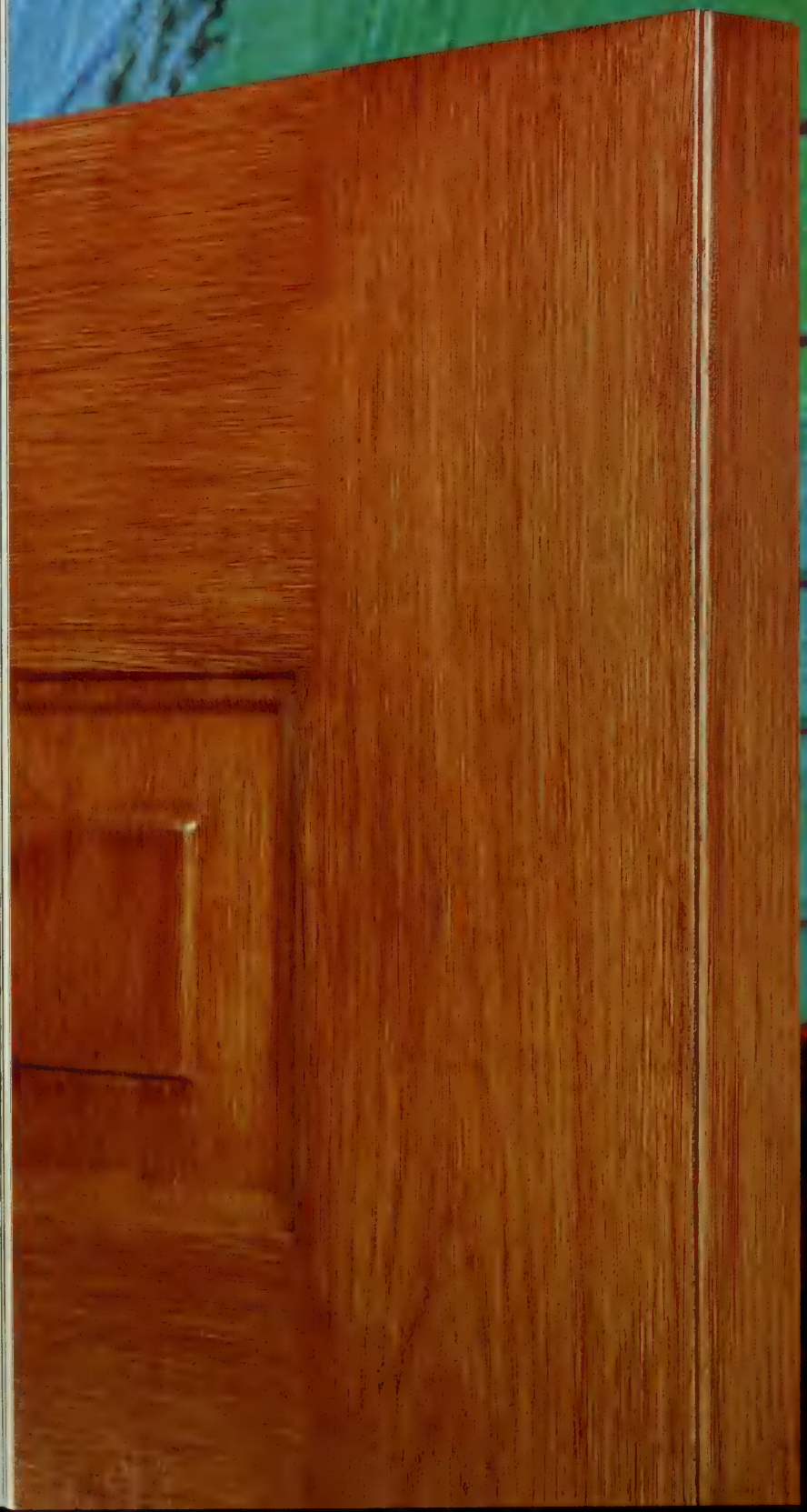




San Diego housing on the boards includes (clockwise from top left) Smith and Others' U.S.S. Essex, Quigley's 151-unit Marina Place, a hotel-parking-condo complex by Studio E Architects, and Carrier-Johnson's Treo complex.


wallboard + mouse = nationalgypsum.com
Making expert decisions has never been simpler. Just log on to nationalgypsum.com for the most comprehensive gypsum products information on the web. Designed for ease of use, it's the only formula you need to make expert decisions, and just what you expect from the gypsum industry's service leader.
National Gypsum COMPANY
www.nationalgypsum.com
1.800.NATIONAL
CIRCLE 27 ON INQUIRY CARD

ARCHITECTURALLY CORRECT



WOOD GRAIN, STAINABLE STEEL DOORS

Ceco MADERA doors offer the industry a 7' 0", wood grain, six-panel, stainable steel door. And the grain on the stiles and rails actually runs in the correct directions! This gives a more natural and aesthetically pleasing appearance.

Don't go against the grain!! Depend on Ceco MADERA doors . . . and be Architecturally Correct!

Proving our leadership . . . everyday.

Ceco Door Products
A United Dominion Company

750 Old Hickory Boulevard
One Brentwood Commons, Suite 150
Brentwood, TN 37027
(615) 661-5030; FAX (615) 370-5299

CIRCLE 28 ON INQUIRY CARD
For further information visit our website at www.cecodoor.com

Stop building roads and consider how transportation systems affect environment

Critique

By Alex Marshall

The more I study cities, the more convinced I am that transportation systems are the central factor in shaping their form and function. How people get around is far more influential in determining the form of our homes and workplaces than zoning, codes, or other regulations.

I've recently returned to live in New York after a decade away, and the unique aspects of my new home still startle and impress me. Most of all I notice the subway, that amazing system that makes everything else in the city possible. Having just come from Boston, which has the oldest subway system in the country, I am surprised by how much better New York's system is. I can go almost anywhere at any time, on lines that often include both express and local service.

The subway system created 20th-century New York, particularly its famous skyline. Skyscrapers would not have been possible without the intricate system of tunnels beneath them. Subway lines and skyscrapers grew together, each creating demand for the other. The first New York subway line opened in 1904. The Woolworth Building, designed by Cass Gilbert and considered the first real skyscraper, opened in 1913. Over the next 25 years, more subway lines—and more skyscrapers—followed. The Chrysler Building, the Empire State Building, and Rockefeller Center capped this era. Midtown and downtown Manhattan, where millions of people work, can only exist as they do because people can get there quickly each day without a car. A single subway line can deliver 60,000 to 80,000 people per hour per track. New York's system, often having two tracks, can transport well over 100,000 per hour. By comparison, a superhighway can only deliver 2,400 cars per hour per lane. And all those cars have to be parked somewhere when their occupants—usually only one person—step out.

Alex Marshall, author of How Cities Work: Suburbs, Sprawl and the Roads Not Taken *(University of Texas Press, January 2001), was a Loeb Fellow at Harvard University's Graduate School of Design last year.*

Transportation shapes place

The New York subway system is a vivid, but hardly unique, example of the way transportation shapes places. The 19th-century streetcar lines created the 19th-century streetcar suburbs. The beltway and Interstate highway system shaped our modern landscape of big-box stores and subdivisions.

Transportation influences individual buildings as much as it does downtowns or edge cities. Aesthetic considerations are often superseded or made irrelevant by the context of transportation. Richard Meier recently completed his new $190 million federal courthouse on Long Island, built as part of the Design Excellence Program of the General Services Administration (GSA). Meier's 12-story white tower, accompanied by a lopsided silolike cylinder that serves as a grand entrance, asserts itself against the island's low-rise world of shopping centers and subdivisions. In front of the building is a grand public plaza. It's truly a beautiful complex.

By necessity, though, a 1,600-space parking lot surrounds it. Paradoxically, the parking and the nearby highways isolate the building they access. Meier would like the courthouse to be a sort of community gathering space, but that's not likely. No one will casually walk by Meier's building on the way to the drugstore, the way people did with courthouses of yore.

One of Meier's heroes, Le Corbusier, displayed a particularly dramatic example of miscalculating how transportation and building design mesh. Le Corbusier made architectural headlines in the 1920s with his "Plan Voisin," which proposed tearing down old Paris and replacing it with soaring towers on parks interlaced with freeways. Corbusier loved cars and showed freeways dotted with a few Model T-style cars running between his towers. Jonathan Barnett, a professor of city planning at the University of Pennsylvania, has recently calculated that each of Le Corbusier's towers would have had to be surrounded by 241 acres of surface parking lots to accommodate the automobiles. Instead of towers in the park, it would have been towers in the car park.



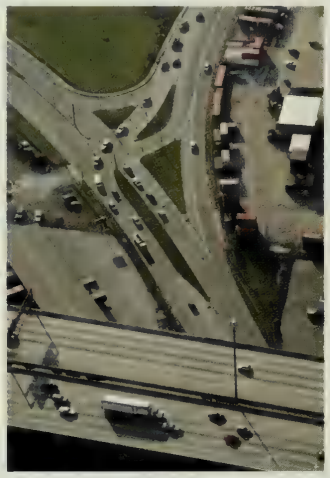
An efficient subway system transports hundreds of thousands of people quickly.

Richard Bulis, a designer of custom homes in Reno, Nev., says parking and access are the first decisions he makes for the "McMansions and starter castles" that he designs. "I have to strategically consider how the cars are going to get on and off pretty much before I consider anything else," he says. "I have to remind my clients that cars don't climb stairs, and they don't turn corners very well. They are stubborn critters."

According to Bulis, a four-car garage is now the norm for custom homes. With a 15-foot-wide driveway, as much as 2,500 square feet, or 25 percent of the buildable area of a half-acre lot, will be paved over, Bulis says.

I'm not criticizing cars. However, architects must work within the demands of a transportation system. The best architects do this assertively. They recognize that changing transportation has always affected design. The way to design a better building, it seems to me, is to look realistically at its environment. The way to produce better environments is to use transportation as a design tool.

Currently, our standard transportation policy is to build more roads to solve traffic jams. This doesn't work. Take Salt Lake City, for example: Its recent expansion of Interstate 15, from 6 lanes into 12, encouraged so much development—instant towns made up of one-acre housing lots, car-dependent office parks, and big-box stores—that a parallel highway was soon needed to keep traffic moving. "The urban superhighway should be relegated to the scrap heap of history," in the words of John O. Norquist, mayor of Milwaukee, which is tearing down portions of a highway that was supposed to cut right through the city.



Sprawling highways gobble up land.

Stop building roads

The quickest way to cure sprawl is to stop building roads. Put money into mass transit of all types and accept the denser cities that result. Subways can be expanded in older cities. New York has approved the new $10 billion Second Avenue subway line on Manhattan's East Side, which should produce a boom of development. Relatively newer edge cities may be able to increase density around subways, light-rail lines, or bus routes.

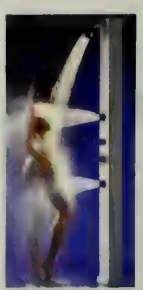
What transportation systems might be next? High-speed rail is producing different living patterns in France. During a recent trip there, I met people who were commuting daily 150 miles each way, a journey of less than an hour. High-speed rail offers tremendous advantages, particularly in the Northeast of the U.S., but other technologies beckon. Automated-highway vehicle control systems, which allow cars to stream along highways almost like a long train, are not yet a reality. A suspended, or supported, transportation system that rides over the terrain is newly installed in Morgantown, W.Va. Another possibility for the future comes from so-called Universal Automobile systems, fleets of small electric-powered public vehicles that passengers can pick up, drive, and drop off, paying per trip as they would for a bus ride. New small civilian aircraft that land like helicopters are in development. For short trips, we may soon find ourselves in small dual-purpose vehicles that can be pedaled or made to function as battery-operated cars with a very limited range. Even jetpacks, à la George Jetson, are a possibility.

Whether the future holds jetpacks or newfangled cars, good architects will always explore the way transportation creates the possibility for new types of buildings and new environments. ■



PHÂRO®
hansgrohe

The free standing Pharo Shower Column is in a class of its own – fabricated of anodized aluminum and shaped in an award-winning puristic design. The column offers completely new bathroom design options making it the choice of indiviualists. Like to see more?



www.hansgrohe-usa.com

For more information call
Hansgrohe at 800 719-1000

CIRCLE 29 ON INQUIRY CARD



VELUX®
ROOF WINDOWS AND SKYLIGHTS

It travels at 186,000 miles per second.

Is it any wonder light has such an impact?

Skylight model FS 308—$209 each.

For more information call 1-800-283-2831. www.VELUX-AMERICA.com

CIRCLE 30 ON INQUIRY CARD

Roppe: The One Source

Working with you to create environments for today, and for tomorrow.

Our Three Cove Base Lines Meet All The New Specifications

When it comes to wall base, Roppe is still the leader. We offer all 3 separate types of cove base defined in the new ASTM cove base specification F-1861.

- Type TS—Thermoset Vulcanized SBR Rubber
- Type TP—Thermoplastic Rubber
- Type TV—Thermoplastic Vinyl

New Accessories Shapes

We offer the largest selection of accessories in the industry, to provide you with the perfect finishing touch for every installation.

More Colors, More Freedom

In addition to our 25 MatchMates "all-product" colors, you'll find one of the widest color selections in the industry. And, you'll find it in every line—from our cove base, to tile, to treads, to accessories. For ever-popular "basics" to the latest warm and cool shades, you'll find colors that give you the freedom of choice you need.

New Products, More Options

New! Fiesta™ Tile & Treads

Beautiful, adaptable, and unique! Our new Fiesta™ tile and treads offers the rugged durability of rubber with a contemporary, playful look. Mix and match colors with our other products for even more fun.

9 Foot Stair Treads

For long stairs that have always been difficult to cover, a seamless tread installation is now a reality. Roppe offers rubber treads in lengths of up to 9 feet, with:

- Color selection (all the same colors as our other rubber treads!)
- Cost savings (no more cutting and piecing)
- A better finished look (no seams)

providing problem-solving and enhanced beauty for many installations.

AlphaBase

This unique product was designed with safety in mind - for schools, hospitals, dormitories, public buildings...anywhere you need to show exits and escape routes out of buildings. You also have the option to order it with any kind of signage you desire—including names and symbols—in any color you require.

Custom School Logos

You can make your school unique by having your own special school logo right in the floor! We can provide any design, in any size, plus we can match your school colors. (Pictured: Eastwood High School, Pemberville, Ohio (*Eastwood Eagles* logo custom color match).



Roppe CORPORATION

CIRCLE 31 ON INQUIRY CARD

1602 N. Union Street ~ P.O. Box 1158 • Fostoria, OH 44830-1158 USA
419-435-8546 • FAX: 419-435-1056 • 1-800-537-9527
For Samples Call Toll-Free 1-877-SAMPLE4 (726-7534)
www.roppe.com • Email: sales@roppe.com

Great collaborators: Tales and tomes from artists who work well with architects

Books

Life Style, *by Bruce Mau. London/New York: Phaidon Press, 2000, 624 pages, $70.*



The bible of Bruce Mau has been published, just in time for holiday gift giving for your design-savvy friends. *Life Style*, by Toronto-based designer Bruce Mau, is a manifesto of his creative process and the work of his studio, Bruce Mau Design (BMD). Mau's work ranges from book and magazine design to physical environments in collaboration with architects such as Rem Koolhaas and Frank Gehry, FAIA. Melding content and form, his design for Koolhaas' 1996 book, *S, M, L, XL*, won critical praise.

Similar in approach, as well as size and heft, to *S, M, L, XL*, *Life Style* weighs in at 624 pages and more than two inches thick. It has been released in a variety of luminous satin covers, so readers can choose colors based on their lifestyle. The book is organized in three major parts: Life Theories (essays and manifestos), Life Projects (BMD studio work), and Life Stories (anecdotes and musings). The imagery ranges from fanciful to disturbing—from signage for Gehry's Walt Disney Concert Hall to images of violence that are becoming commonplace.

Mau questions his own methods of practice, which is refreshing and allows readers to question as well: To what extent does culture shape design? To what extent is design shaping culture? And at what point, if any, do design and culture blur?

In *Life Style*, we get to know Mau, his work, and his process—a rare feat for a book. Even if you've been to places designed by Mau or read publications designed by Mau, you've never really experienced Mau until you've read *Life Style*. Then you'll see the world around you in a whole new way.

Reviewed by John E. Czarnecki, Assoc. AIA

Isamu Noguchi: A Study of Space, *by Ana Maria Torres. New York: Monacelli, 2000, 324 pages, $65.*

In both his life and work, the artist Isamu Noguchi was a bridge—between his father's Japanese culture and his mother's American roots, between ancient methods and modern technologies, and between sculpture and architecture. A great collaborator, Noguchi worked with choreographer Martha Graham on sets for her dance productions and with architects such as Gordon Bunshaft, Edward Durrell Stone, and Kenzo Tange on gardens and plazas for buildings around the globe. As Ana Maria Torres explains in this handsome book, Noguchi's conception of a "sculpture of space" was fundamental to all of his designs.

"Noguchi's experimentation, his eclecticism, and his multidisciplinary character helped him create spaces in which the private sculptural object was integrated with architectonic, theatrical, and environmental spaces. As a result, his projects were endowed with special harmony," states Torres.

A Spanish architect who is a principal at the landscape design firm Balmori Associates in New Haven, Torres began working on this book more than a decade ago after writing her doctoral dissertation on Noguchi. Her hard work shows in the book's smart prose and straightforward presentation. Instead of organizing the book chronologically, Torres divides projects into seven types: playgrounds; earthworks; gardens, plazas, and parks; memorials; fountains; interiors; and public sculptures. The organizational device is a good



way of looking at recurring themes and alternative approaches to similar programs. For good measure, she provides a chronological list of the artists' projects in the back of the book. Designed by Esther Bridavsky and Michael Beirut of Pentagram, the book makes good use of old photographs and plenty of drawings. I only wish it had included some color photography to better show Noguchi's remarkable eye for the subtle hues of nature and his skill at injecting blasts of color into abstract compositions.

Reviewed by Clifford Pearson

Building Images: Seventy Years of Photography at Hedrich Blessing. *San Francisco: Chronicle, 2000, 192 pages, $75.*

Every architect who has seen someone else's photographs of his buildings knows how difficult it is to translate architecture into two dimensions. So when you find a photograph that captures the spirit of a building or a place, it can make your heart race. Remarkably, the photographers at Hedrich Blessing have been making hearts race since the start of the Great Depression.

Founded by 21-year-old Ken Hedrich in downtown Chicago in 1929, the small commercial photography studio eventually became a collective firm of photographers whose work has illuminated the pages of architectural magazines (including hundreds of issues of ARCHITECTURAL RECORD), consumer publications, corporate reports, and books. Starting with Hedrich, who was "on camera" until 1971, the firm has included 19 photographers, 11 of whom are now active. Like its hometown, Hedrich Blessing has been able to combine art and commerce in an unpretentious, clas-

sically American kind of way. In the process, its photographers have earned the trust of some of the great architects of the 20th century: Frank Lloyd Wright, Ludwig Mies van der Rohe, Eliel Saarinen, and Skidmore, Owings & Merrill.



The book includes an introduction by Timothy Samuelson of the Chicago Historical Society (which is the keeper of the firm's archive of half a million photographs) and an essay by Tony Hiss. Samuelson notes some of Hedrich Blessing's precursors (such as J.W. Taylor and Ralph Cleveland, who photographed many of Louis Sullivan's buildings in the 1890s). Hiss places Hedrich Blessing in the larger context of architectural photography and explains what made Hedrich and his heirs so different and important. But the book is really about the photographs—big, beautiful images (both color and black-and-white) that not only seduce us but inform us. Not every photograph here reaches the highest level of understanding, but enough do to make the reader marvel.
Clifford Pearson

American Contemporary Furniture, *text by Marisa Bartolucci and Cathy Lang Ho, edited by Raul Cabra and Dung Ngo. New York: Rizzoli Universe, 2000, 208 pages, $35 (paper).*

This smashing-looking book is a bit of a tease. It has all the right moves: excellent product photography, an intriguing photo essay by Richard Barnes, insightful essays by Marisa Bartolucci and Cathy Lang Ho, and a sizzling lineup of hot young designers. Browse through it for a few minutes and you start to fall in love with the sleek, sexy lines of the furniture and the energetic design of the book itself. But if you



spend too much time with the book or think too much about it, you can go a little crazy.

Within the book's simple geographic divisions (the East, the West, and "the great in-between"), pieces of furniture and contemporary designers float around in a stylish brew with a Karim Rashid cabinet here, a Constantin Boym chair there, and then a Rashid chaise somewhere else. Although there are vague connections between pieces shown next to one another (similar lines or materials or attitudes toward transparency), there is no overt organization. So finding a particular item or designer is a hit-or-miss affair. And since a designer may have pieces strewn throughout a geographic section, it's hard to see his or her designs as a body of work.

It is also odd to find first-person essays from five of the "more than 70" designers, but little or no information on most of the others. As a jazzy, improvisational take on the current design scene, this book works marvelously. Just don't expect it to be a handy reference to the world of contemporary furniture.
Clifford Pearson

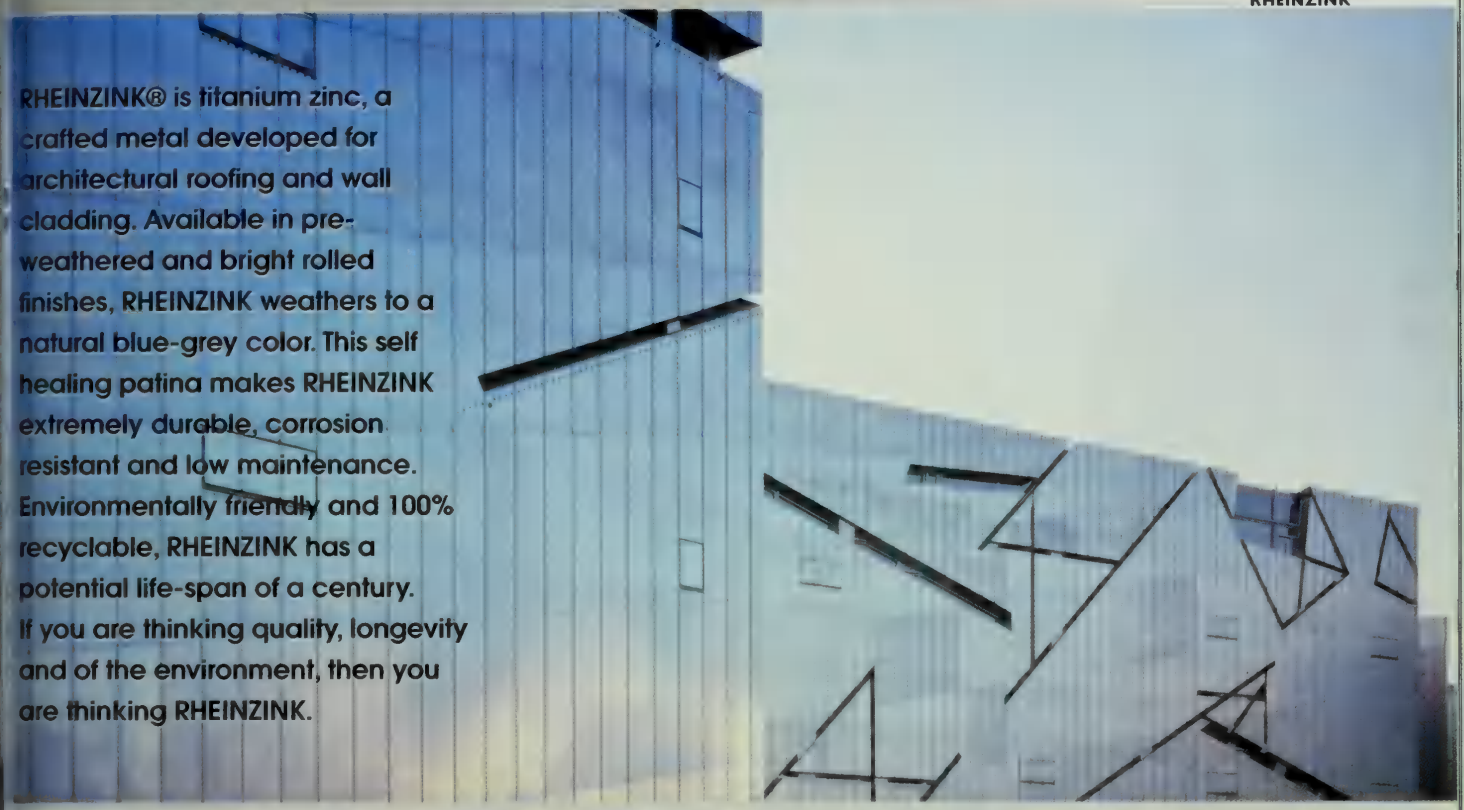
WWW *For more book reviews, including a new review every Friday, go to* ***www.architecturalrecord.com/weekly/reviews.asp***



CIRCLE 32 ON INQUIRY CARD

RHEINZINK CANADA LTD.

RHEINZINK



RHEINZINK® is titanium zinc, a crafted metal developed for architectural roofing and wall cladding. Available in pre-weathered and bright rolled finishes, RHEINZINK weathers to a natural blue-grey color. This self healing patina makes RHEINZINK extremely durable, corrosion resistant and low maintenance. Environmentally friendly and 100% recyclable, RHEINZINK has a potential life-span of a century. If you are thinking quality, longevity and of the environment, then you are thinking RHEINZINK.

COMPLEX STRUCTURES WITH RHEINZINK®

The new Jewish Museum in Berlin is one of the most impressive examples of progressive architecture in the new Capital. The American architect Daniel Libeskind designed the expansion. His eccentric design is impressive due to its complex, angular structure and the formed metallic building skin. Daniel Libeskind chose natural shiny RHEINZINK®, a bold architectural recognition of the zinc tradition going back to Karl Friedrich Schinkel. Accordingly, this special project was completed with exemplary cooperation between the architect, the skilled tradesmen, and RHEINZINK Application/ Engineering support.

Architectural Challenge

The noticeable distinguishing features, apart from the zigzag shape, are the seemingly random light openings which form diagonal, irregular lines that pierce the facade and the sharp-angles generating architectural tension, which lends expression to the theme of the Jewish Museum. In cooperation with the RHEINZINK consulting engineers, a detail team consisting of planners, architects and skilled tradespeople, the extremely complicated design was developed and resolved. The result was to cover a 12,500 square meter facade in angled standing seam.

High Quality Drainage System

The numerous irregular diagonal facade openings and constantly changing direction, required the implementation of extensive custom special solutions, e.g. windowsills. The covers had to be designed containing functional drainage systems able to collect, drain and distribute large amounts of rainwater. Additionally, all components of the facade were designed flush with the cladding.

In order to guarantee even drainage, cross-drains that transport the rainwater directly to internal water storage tanks, were installed at 6 to 8 meters on center. In total, almost 3000 m of collection and drainage systems were integrated into the facades.

Recognized Solutions with RHEINZINK®

The large-scaled facade of the Jewish Museum exhibits the capabilities of the metal works trade.

The architecture of Daniel Libeskind has been recognized worldwide and has received the 1999 German Architectural Award. RHEINZINK® is favored by architects internationally because it is very adaptable and works well with a number of building materials, both aesthetically and technically.

RHEINZINK CANADA LTD. 4595 TILLICUM STREET, BURNABY, BRITISH COLUMBIA, CANADA V5J 3J9
TEL (604) 291-8171 FAX (604) 291-1343
E-mail: rheinzink@rheinzink.ca Website: www.rheinzink.com
BOSTON OFFICE TEL. (617) 948-2520 TORONTO OFFICE TEL. (416) 593-5672

CIRCLE 33 ON INQUIRY

Manage my risks? Simple as V-E-P.



Michael Davy
President
Davy Engineering Co., Inc.

The key to managing risk is knowing what to look for. And the CNA/Schinnerer Voluntary Education Program (VEP) points us in the right direction. The VEP allows our engineers to earn required credits while also making sure they're aware of potential risks. Understanding the sources of risk makes us better prepared to deal with that risk in the real world of project delivery. Plus, we get to complete the course on our own schedule, without having to spend a lot of time out of the office. The program doesn't even cost us anything, but what we gain is invaluable. It's just one more reason we know CNA/Schinnerer is the right choice for us.

This advertisement is for illustrative purposes and is not a contract. It is intended to provide only a general overview of the services and products offered. Only your policy can provide terms, coverages, amounts, conditions and exclusions. CNA is a registered service mark, domain name and trade name of CNA Financial Corporation. This program is underwritten by Continental Casualty Company, a CNA company, and is managed by Victor O. Schinnerer & Company. All coverages not available in all states. © CNA Financial Corporation. All rights reserved.

To learn more about our risk management programs and services fax the following information to 301-951-5444:

Name: _____

Address: _____

City: _____ State: _____

Zip: _____ Phone: _____

E-mail address: _____

Or e-mail us at info@schinnerer.com
or call 301-951-9746
or visit www.schinnerer.com

Victor O. Schinnerer & Company, Inc.

CNA PRO

CIRCLE 34 ON INQUIRY CARD

2001 economic forecast: Slow but steady growth

Practice Matters

Edited by Charles Linn, AIA

A look at the forces behind the outstanding growth of the U.S. economy and the future of the construction industry were some of the topics covered at F.W. Dodge's Outlook 2001 Executive Conference, held in Washington, D.C., October 17–18. Featured speakers were: David Wyss, chief economist for Standard & Poor's DRI, the largest economic consulting firm in the U.S.; Robert Murray, vice president of economic affairs for the McGraw-Hill's Construction Information Group (CIG); and Kermit Baker, Ph.D., chief economist for the American Institute of Architects. Clients, architects, and builders in the audience remained on the alert for changes in the current boom times.

The productivity miracle

David Wyss explained that he believes the economy has been energetic because worker productivity has sustained higher annual increases over the last decade than was previously thought possible. This "has been the main puzzle behind the U.S. economy's robust growth. Based on DRI analysis of recent data, the sustainable rate of productivity growth appears to be in the 3.5 to 4.0 percent range, a substantial increase over the 2.5 percent limit espoused by conventional wisdom."

Much of this is due to the personal-computer revolution. Even though computers have been used by businesses for the past 40 years, it took a generation for them to become fully accepted and affordable. While much of the U.S. economy has traditionally been based on manufacturing, computers have made great strides in increasing productivity in the services sector. For example, in architects' offices, the shift from hand-drafting to CAD occurred almost entirely within the last 10 years. It has reduced costs while increasing the demand for technically proficient workers. This has been a fairly typical scenario in many service sectors and has helped to lessen the economy's dependence on the manufacturing sector, which has, to a large extent, been moving operations outside the U.S.

With productivity rates accelerating, employers have been getting so much more output from workers that Wyss called the 1990s "a productivity miracle." He went on to link this increase in productivity to the rate of inflation, which remains at a 30-year low. "Wage increases have accelerated in response to tight labor markets, which has allowed workers to receive real wage gains without causing price inflation," he said.

The construction-industry economy slows

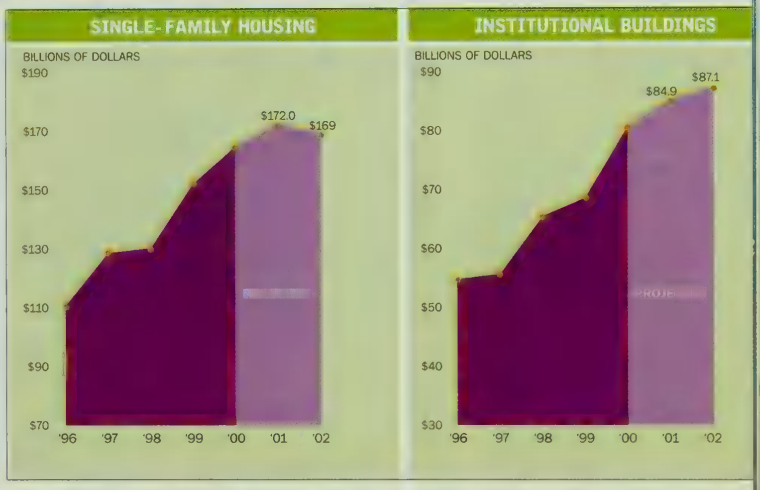
The Federal Reserve Board has also played a part in keeping inflation under control. Between June 1999 and May 2000, the Fed tightened monetary policy six times, lifting the federal funds rate from 4.75 percent to 6.5 percent. According to the Construction Information Group's Robert Murray, these higher financing costs, combined with more restrictive lending policies at banks, which have been encouraged by Federal Reserve Chairman Alan Greenspan, will put a noticeable damper on business conditions toward the end of this year and into 2001. Total construction activity during 2000 will rise 3 percent, to $462 billion, according to Murray. While this is not as large as the 10 percent increase recorded for 1999, it still marks the ninth consecutive year of expansion in current dollar terms. On a constant-dollar basis, construction activity will essentially match the previous year's amount.

Although Murray sees slower, more controlled growth for 2001, he remains quite positive about the future. "The immediate years ahead will continue to be healthy ones because currently we are not facing the imbalances that have been present in the latter stages of prior economic expansions. That is definitely a reason to be optimistic."

Single-family housing

The AIA's chief economist Kermit Baker gave details concerning the growth of the single-family housing market, noting that home sales, home ownership, and the value of residential construction all set new records in 1999. Housing was still strong through the first quarter of 2000, and starts have not declined for the past eight years—the longest housing expansion in the past half century.

Soaring stock prices and low interest rates have also driven up the demand for second homes over the past eight years, adding 16 mil-

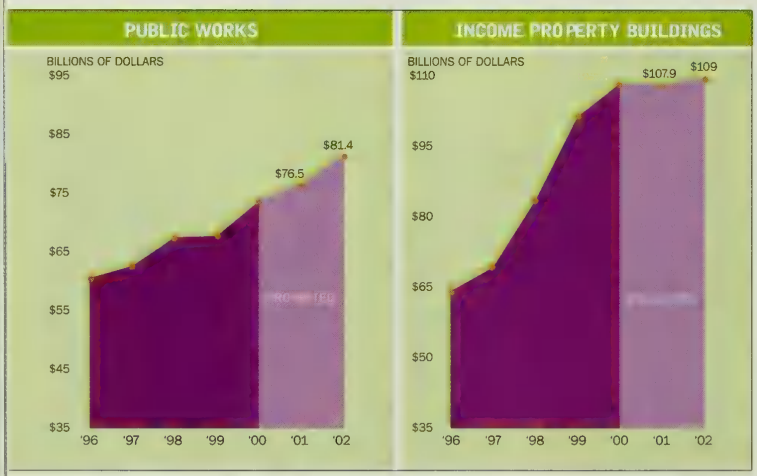


Declining stock prices have slowed demand for single-family homes, but spending for education buildings will allow institutional construction to rise.

lion units to the United States housing stock.

Murray added, however, that higher interest rates and this year's decline in stock prices have diminished the nation's pool of instant millionaires, restraining homebuyer demand. He says this trend should continue through the end of this year, pulling down the level of single-family starts from an increase of 8 percent in 1999 to 5 percent in 2000.

If the economy moves upward at only 3.5 percent next year, the growth in single-family housing will not be as great as it has been over the last several years. Still, at a projected 1.125 million new units next year, single-family housing will be 10 percent above the annual average for the 1990s.



Federal funding for transportation will keep public works strong. Apartments lead the way in income-properties spending, as retail and office have slowed.

Institutional building

This market sector grew by 18 percent in 1999, is on track to post another 5 percent increase in dollar volume this year, and is projected to grow 3 percent in 2001. The strength in this sector is largely due to the healthy status of state and local governments. Educational building grew 24 percent in 1999 due to the passage of many school construction bond measures. Enrollment is increasing at high schools and colleges as children of the baby-boom generation come of age, and these building types are particularly active now. By the end of this year, Murray predicts that the educational building category will advance another 10 percent.

Healthcare facilities also registered a strong increase in 1999, climbing 18 percent as a result of strong contracts for clinics and nursing homes. A 4 percent decline is expected this year due to the financial constraints affecting the managed-care industry. The public buildings category, including detention facilities and courthouses, grew 25 percent in 1999 and is expected to stabilize in 2000.

Sports arenas and theaters showed steady growth during the second half of the 1990s, but both types have slipped back from their recent peaks. The big push has come from spending on large convention-center projects. During the first half of 2000, the dollar volume of convention-center work was over five times what it was in 1999, increasing because of large projects in Washington, D.C., Orlando, and Boston.

Public works construction

Project contracts increased by 8 percent in 1999, with growth in most building types. Murray predicted that this will slow slightly to 5 percent for 2000 but rebound to 6 percent for 2001. Highways, bridges, and mass transit were boosted by financing from the Transportation Equity Act for the 21st Century (TEA-21). The growth shown by airport-related construction was exceptional, even though runway and terminal construction is not expected to match the surge of activity that occurred in 1999, when these increased 31 percent and 143 percent, respectively. But activity should remain high through the rest of 2000, compared to the standards of recent years. A new federal aviation bill that passed in the spring of 2000 will offer additional financial support for airport construction, especially at regional airports.

THE CONSTRUCTION INDUSTRY IS NOW "ROUNDING THE PEAK" OF ITS HISTORY-MAKING EXPANSION

Income-property buildings

This market grew a remarkable 20 percent in dollar volume between 1997 and 1998, with a 6 percent increase reported for 1999. This year some building types in this sector have continued to gain ground while others have lost some, so no gain in this market is predicted for 2000, although there is a chance for growth of about 2 percent in 2001. Tightened lending policies have had a major impact on this sector.

Store construction has closely followed the pattern for single-family housing, with growth in the residential market spurring new retail projects. Developers and retailers have been extremely competitive, introducing new project types, such as entertainment-based complexes and large outlet centers. Considering that store construction hit an all-time high in 1999, a 4 percent drop for 2000 is no surprise.

Internet-based retailing has not, it seems, influenced store construction, except in a positive way: Growing demand for warehouse space will contribute to a 10 percent increase in warehouse construction during 2000.

Office construction during 1999 showed stability in dollar volume; however, there was a 5 percent decline on a square-foot basis. Developers and lenders are showing greater discipline, assessing project viability more thoroughly than in the past.

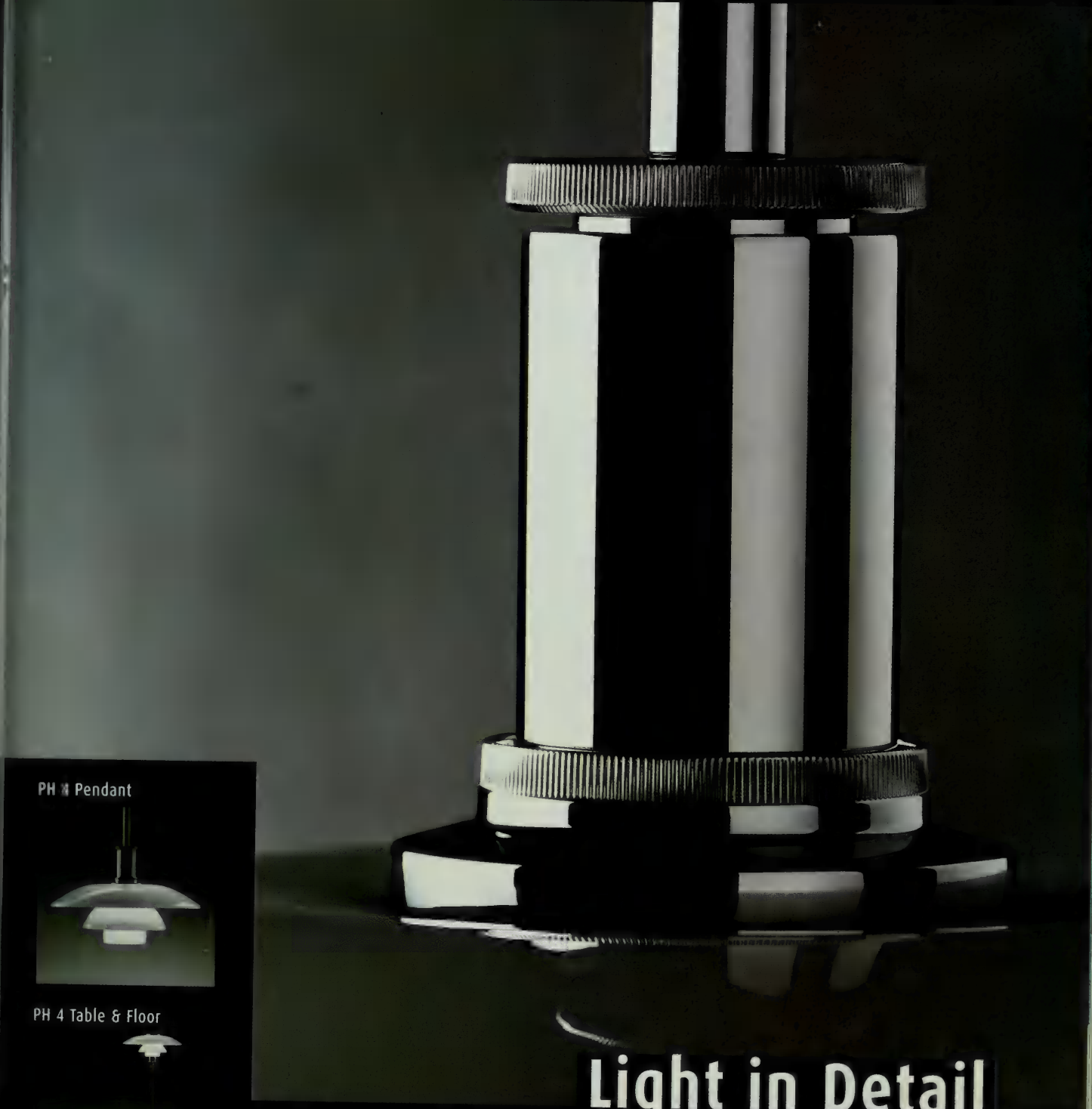
Multifamily housing improved 11 percent in dollar value during 1999, and another percent gain is projected for 2000. Real-estate financiers see multifamily housing as an attractive investment, and new downtown apartment projects are the result of the "smart growth" initiatives under way in some metropolitan areas.

Hotel construction seems to be the most vulnerable building type in the income-properties group. In 1999 a retrenchment for limited-service accommodations resulted in a 6 percent decline, with a 2 percent drop predicted for 2000.

The bottom line

Total construction contracting is projected to rise about 3 percent during 2000, down from the 10 percent increase of 1999. CIG's Murray believes the construction industry is now "rounding the peak" of its history-making expansion. A similar rate of activity can be anticipated for 2001, as the economy settles into a soft landing, although growth may come from a different mix of market sectors.

The greatest indicators of slowed growth will be seen in single-family housing and income properties, while activity in public works and institutional building will underpin these sectors with a measure of stability. ■



PH 4

Design: Poul Henningsen

louis poulsen

Poulsen Lighting, Inc.
3260 Meridian Parkway • Ft. Lauderdale, FL 33331
Tel.: 954-349-2525 • Fax: 954-349-2550 • info@louispoulsen.com

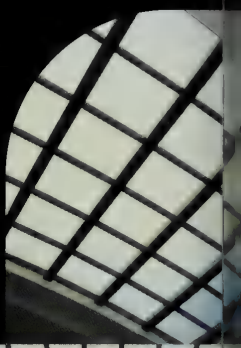
Visit us on the Internet at: http://www.louispoulsen.com

CIRCLE 35 ON INQUIRY CARD

MM SYSTEMS

guaranteed to never leak

...ever.

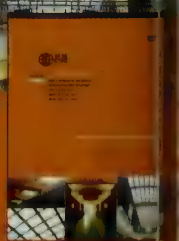


HOW can MM guarantee that these stunning skylights at the Mall of Georgia will never leak ...ever? Look again. These "skylights" are actually MM's Variable Beam Grid ceiling system posing as monumental skylights—minus the expense, maintenance and inevitable leaks. *Surprised?*

Project architects took advantage of VBG Series' inherent flexibility by calling for varying beam sizes, recessed cross-members and a barrel-vault effect. Don't forget the factory applied Kynar 500®/Hylar 5000® finish in a custom color.

Finally, to complete the illusion, white and blue cold cathode lights were hidden inside the larger beams. Through time-elapsed sequencing, the lights transform a nearly invisible gypsum ceiling into a sunrise, twilight or cloud dotted midday sky. VBG Series Ceiling Grids—even the sky is not the limit.





For a complete brochure on Series VBG custom ceiling grids and other interior specialties, call or write: MM Systems Corporation, 4520 Elmdale Drive, Tucker, GA 30084, (800) 241-3460.

MM
MM SYSTEMS

Forging the products of your imagination

Photo Credits: Mall of Geo
Architect: Thompson Ventulett Stainback and Associa
Contractor: Mulkey Enterpri

Kynar 500® is a registered trademark of Elf Atochem North America, Inc. / Hylar 5000® is a registered trademark of Ausimont USA

CIRCLE 36 ON INQUIRY CARD

Snapshot



By Ingrid Whitehead

Finding new horizons in an Upper East Side courtyard

"You felt as if you were at the bottom of a pit," says architect Francois de Menil about the preexisting state of the courtyard he renovated for a private New York City elementary school. Contained in what was once a brownstone with a 17-by-20-by-20-foot exterior space set 20 feet below street level, the Upper East Side school was in need of a transformation. Set back from the faculty kitchen, the outside area was ignored by teachers, who would much rather enjoy their morning coffee or between-class breaks in a a more peaceful place. De Menil, who attended the school, as did his son, saw potential and offered to re-create the courtyard from the dungeon-like vault it was into a space more conducive to contemplative and relaxing moments for the faculty.

Challenged with minimal sunlight in the courtyard (numerous past attempts at live plantings had been thwarted by the lack of natural light), de Menil chose simple devices to create horizontal sightlines. He knocked out the existing tripartite facade and installed a floor-to-ceiling glass window/wall and door between yard and

lounge, creating an aperture that would allow sunlight in.

Drawing inspiration from the paintings of artist Bryce Marden, the sculpture of Constantin Brancusi, and from nature itself, de Menil put river-washed stones along the walls, pulling the black-granite floor away from them and creating an ambiguity of beginning and ending planes. He then reorganized the space in the yard with the introduction of colored walls—two colors, one above and one below the idealized sightline—designed to trick the eye into seeing an infinite horizon. To this effect, he also installed a row of sunken lights that wash the north-facing wall at night, reinforcing the idealized horizon. "I wanted to achieve the same sightlines you might see when staring out into the sea," says de Menil.

References to—or substitutes for—trees followed, with the installation of three bronze totems of varying heights. Each totem consists of a welded steel structural tube that was lowered into the courtyard by crane, then fitted with patinated bronze drums in four sections that seem to balance precariously upon one another while reaching upward. According to de Menil, the totems, through their varying sizes and heights, represent the aspirations of education and amplify the sense of perspectival depth created by the horizon line. With a nod toward building blocks as well, the totems give a whimsical yet elegant, forestlike feel, activating the space. ■



In the courtyard, patinated bronze totems, 15, 12, and 9 feet high, act as a substitute for trees and stand as symbols of the aspirations of education.



the BEST in ROOFING METALS

TCS® AND TERNE just got better!

Newly developed TCS II® and TERNE II® offer better corrosion resistance than Follansbee's original TCS and Terne. Coated with a new, revolutionary alloy of zinc and tin, these new environmentally-friendly roofing metals are oxygen-reactive, enhancing their performance in all atmospheres including those in marine areas.

The new alloy, while retaining solderability, is substantially more abrasion and smudge resistant. TCS II does not require painting and transforms its color to an earth-gray oxide as it weathers. TERNE II requires painting and its surface has an excellent affinity to paint.

Follansbee offers you these two outstanding roofing metals-combining many of the time-tested characteristics of the original metals with metallurgical and production improvements which answer the demanding needs of the next century.

We'll be happy to send you substantiating evidence of the excellence of TCS II and TERNE II. Call us toll-free at 1-800-624-0906.

Creating outstanding roofing metals for more than a century

FOLLANSBEE®

FOLLANSBEE STEEL • FOLLANSBEE INVENT
FAX 1-304-527-1259

Visit us on the Website:
www.follansbee.com

Our E-Mail address:
[illegible]

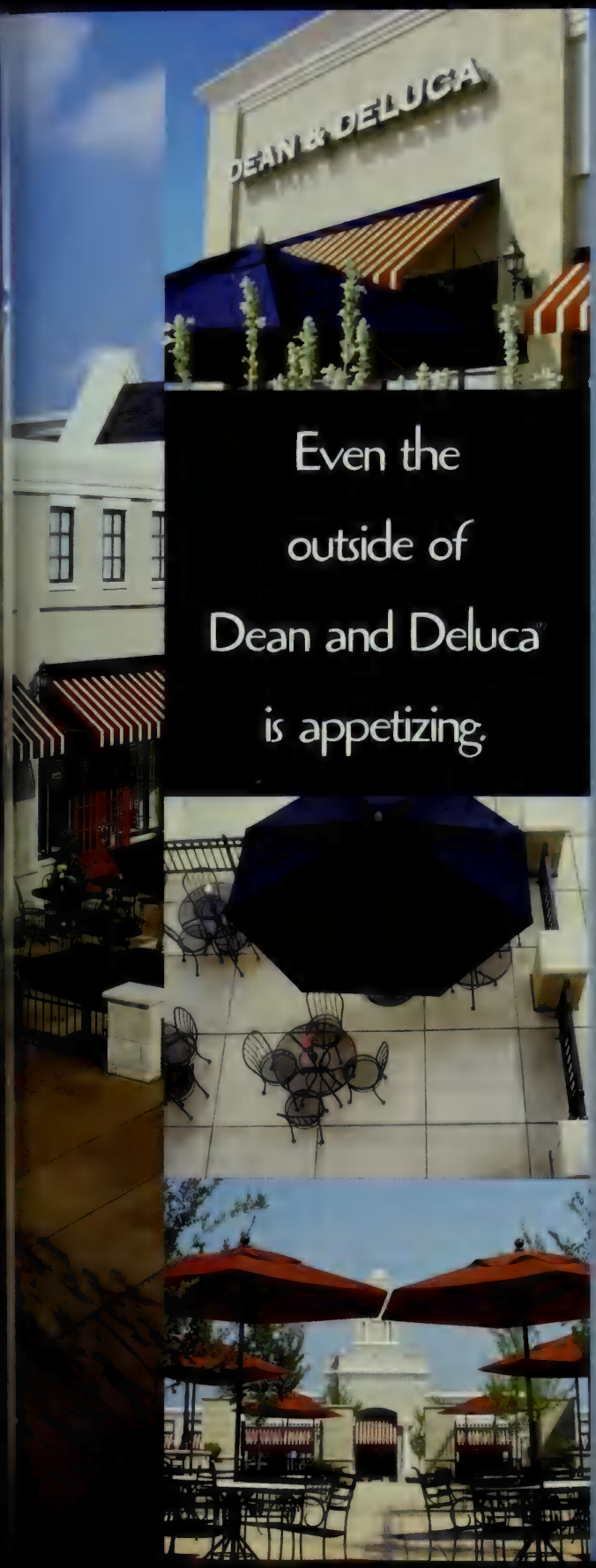
TCS II® and TERNE II®

for enhanced corrosion resistance in marine and chemical atmospheres

CIRCLE 37 ON INQUIRY CARD



Firesist and are registered trademarks of Raven Mills, Inc. • is a trademark of Solutia, and is used with permission. Available fabrication by Plastex, Charlotte, NC. • www.sunbrella.com



Even the outside of Dean and Deluca® is appetizing.

Before you smell the aroma, before you taste the food, before you walk through the door, you get a sense of the wonderful experience that awaits. The culinary masters at Dean & Deluca® even know how to whet your appetite with architectural design. By blending the beauty of Sunbrella Firesist® modacrylic fabric with the building's European style, they've created a true gourmet presentation.

But presentation is only part of the recipe. Choosing the finest ingredients for building design is vital. That's why Sunbrella Firesist was the obvious choice. Superior flame retardancy is inherent in the fabric, instead of just applied to the surface. In fact, it's woven from SEF+™ self-extinguishing modacrylic fibers. So it meets the strictest fire codes. Sunbrella Firesist fabric also resists fading from sun and rain, because our solution-dyed colors are locked-in. That keeps it looking fresh for years. In fact, we offer a five-year limited warranty. Sunbrella Firesist even makes the inside of Dean & Deluca more appealing. Our breathable awning fabric doesn't trap heat or moisture, which reduces air conditioning costs and keeps patrons comfortable.

When you design your next gourmet masterpiece, choose Sunbrella Firesist. We have more than 25 styles and colors to choose from. So you can find something that suits your personal taste.

Check the Yellow Pages under "Awnings and Canopies" for the awning dealer near you. Or contact Glen Raven Custom Fabrics, LLC, Glen Raven, NC 27217.

sunbrella firesist®
GLEN RAVEN MILLS, INC.

CIRCLE 38 ON INQUIRY CARD



Tales from the Avant-Garde:

How the New Economy is Transforming

By Michael Speaks

Colin Rowe's story about Modern architecture's trip across the Atlantic Ocean in the early part of the last century galvanized a generation of would-be avant-gardists. In the introduction to *The Five Architects* (1972), Rowe told how form and ideology became separated on the journey from Europe to America. Ideology remained in Europe or dropped off somewhere in the cold depths of the Atlantic, while form arrived on American shores to become the preferred style of corporate America. It was this "International Style" architecture that was subsequently repackaged and sold to the rest of the world, including Europe, as truly modern. And it was this same architecture that inspired a generation of avant-garde architects and critics to reconnect form and ideology and make Modern architecture politically relevant.

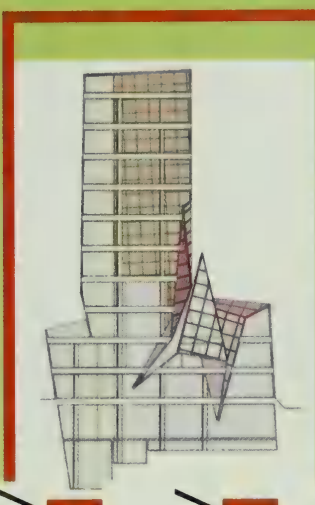
Rowe's story line also could apply to the arrival of "theory" on American shores in the 1970s. Like modern architecture, theory made its passage from Europe to America, where it took on a lighter, more occasional existence. A collection of mostly French, German, and Italian philosophical tracts, theory was introduced into the American academy through departments of comparative literature and was immediately recognized by all as a wondrous new mode of contemporary thought. In Europe, Jacques Derrida and Gilles Deleuze were philosophers, but in America they became theorists. Theory was portable—it could be attached to almost any field of study: film, literature, anthropology, art history, even architecture. Portable too,

Left to right: Pietro Belluschi, Equitable Building, Portland, Ore., 1948; Peter Eisenman, Alteka Office Building project, Tokyo, 1992

Michael Speaks has a Ph.D. in literature from Duke University, where he worked with Frederic Jameson at the Center for Critical Theory. He is head of the graduate program and director of the Metropolitan Research and Design Postgraduate Degree at the Southern California Institute of Architecture in Los Angeles.

PHOTOGRAPHY CONCEPT/PHOTOMONTAGE LOOKINGLATELY NEW YORK





Theory and Practice

because it had been translated into American English, thereby freeing it from the bonds of national identity or professional affiliation.

Theory carried all the punch of philosophy without the windy German preambles and recondite French qualifications. More important, it could be mastered (so it seemed) without years of study, political affiliation, or deep knowledge. Theory was a weapon of the young, the post-1968 generation wearied by the morality and slowness of their elders. Theory was fast philosophy, but it arrived in architecture late, as Mark Wigley has so famously and so frequently pointed out. And when it did, it was inevitable that theory and the formalist Modern architecture described by Rowe would cross paths.

Word and form meet again—briefly

Rowe's story gives us a way to understand more clearly the contemporary avant-garde's ambitions to reestablish the social mission of Modern architecture, to reconnect word and form, and to do so in a formal vocabulary that is recognizably modern. Nowhere has this been more evident than in journals of the 1980s and 1990s, such as *Assemblage* and *ANY*. In these magazines and in their sister publications and conferences, theory was attached to experimental form in an attempt to create a critical, resistant, avant-garde architecture with left-leaning sympathies. The use of theory as a guarantor of avant-garde credentials began in earnest with *Oppositions*, the journal produced by Peter Eisenman's Institute for Architecture and Urban Studies from 1973 to 1984, and has continued in its progeny, *ANY* and *Assemblage*, as well as in other publications. Perhaps the last attempt to make this connection between ideology and form occurred in the 1993 *Architectural Design* issue "Folding in Architecture." Guest-edited by former Eisenman protégé Greg Lynn, the publication used Gilles Deleuze's *The Fold: Leibniz and the Baroque* to launch a folded formal style that enjoyed a period of intense, though brief, popularity.

But sometime in the mid- to late 1990s the avant-garde desire to reconnect form and ideology diminished. Form began to melt into blobs and fields of data while ideology loosened up and became reconfigured as identity "branding" and "lifestyle" issues. As pop science, new computer-animation software, and branding became more pressing issues in architecture, the "critical" position ostensibly enabled by theory began to loosen its hold on the avant-garde. Summing up the mood in MOVE (1999), their aptly named guidebook for networked architecture practices, Dutch architects Ben van Berkel and Caroline Bos declared on the eve of the new millennium that architects would soon become the fashion designers of the future. Architects, they proposed, should form alliances with management consultants, engineers, marketing specialists, and other "creatives" to become change managers in a world in which change is the only constant.

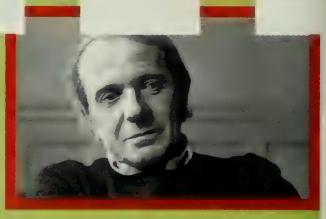
The truth of this observation seemed to put an end to theory once and for all. Theory, or what little there is left of it today, remains resolutely critical and resistant to the emergent commercial reality driven by the forces of globalization. Weighed down by its historical attachment to philosophy, theory has not been free or quick enough to deal with the blur of e-commerce and networked, open systems. Ultimately, theory, and the avant-garde work it supported, has proved inadequate in the vicissitudes of the contemporary world. And so today we stand at the end of a historical period of experimentation dominated by Rowe's little story.

Another story begins

A new story has recently emerged that is not so much about ideology and form as about an emergent global fascination with dot.coms, the







Above, top to bottom: **Colin Rowe, Jacques Derrida, and Gilles Deleuze**

Opposite page: **UN Studio, Ben van Berkel and Caroline Bos, HOV Bridge, Utrecht, 1998**

new economy, and management culture. All of these have superseded the distinction between the avant-garde and the commercial world it was forced to renounce and resist. What has emerged instead is a new distinction between two forms of architectural practice, one entrepreneurial, one corporate. Both, however, acknowledge that they are commercial enterprises competing in the global marketplace.

The ascendancy of the new economy has focused attention in the U.S. on a new breed of entrepreneurial managers who are showcased in business lifestyle magazines such as *Fast Company*, *Red Herring*, and *Business 2.0*. Elsewhere, in Britain and on the Continent, the focus has been on a fresh generation of management consultants working in think tanks such as Demos in London or the Advanced Management Program in Stockholm.

Though witnessed primarily in the fast-paced world of global business consultancies, these managerial post-avant-gardists are showing up with greater frequency in the world of high design, architecture, and urban planning, especially in architecture schools. Two of the most aggressive are the AA's Design Research Laboratory and SCI-Arc's new postgraduate Metropolitan Research and Design Program. Both programs assert that architecture should no longer recoil from the degraded world of business and managerial thinking. On the contrary, it should aggressively seek to transform itself into a research-based business. This sober assessment has become the primary motivator for a fleet-footed generation of architects and urbanists who today must develop design strategies "soft" and flexible enough to compete in a constantly changing global marketplace.

Market model for new architectural practices

One of the most enterprising responses to this challenge has been proposed by Alejandro Zaera-Polo, principal of London-based Foreign Office Architects (FOA). In a recent essay, Zaera-Polo constructed a map of contemporary design practices based on what he calls a market model rather than a bureaucratic model. Zaera-Polo is interested in producing an instrumental map of practices that young offices can use to create flexible ones of their own, thus enabling them to respond better to the new market reality of globalization. What he calls "a niche-seeking map" is a pragmatic device for adjusting practices to changing conditions. The purpose of the map, he suggests, "is not to discover 'what's cool,' but rather what is yet to be exploited." As Zaera-Polo explains, we no longer live in a single world dominated by Le Corbusier or Mies, but in a world made of worlds, each governed by its own set of conjectures about the truth.

But what are practices in this sense? They are the techniques, relationships, intelligence, and dispositions that shape design. These intangibles add value and ultimately distinguish one firm from another. Practices result in designs and buildings: rather than requiring us to carry



WEIGHED DOWN BY ITS HISTORICAL ATTACHMENT TO PHILOSOPHY, THEORY HAS NOT BEEN FREE OR QUICK ENOUGH TO DEAL WITH THE BLUR OF E-COMMERCE AND NETWORKED, OPEN SYSTEMS.

out a design with instructions from the client, the "intelligence" gleaned from these practices allows us to manipulate the conditions under which designs and buildings are produced. At the same time we can search for new opportunities that can be exploited. Such practices, in other words, allow a greater degree of innovation because they encourage opportunism and risk taking rather than problem solving. These practices are thus more flexible than either styles or identities; they can adjust to changing conditions without being locked into formalistic or national or regional design signatures.

Another form of this entrepreneurial-managerial approach can been seen in the emerging world of "rapid prototyping." Here the search for "new" prototypes that solve specific problems is displaced by prototypes focused on binding together teams that innovate. As MIT Professor Michael Schrage has argued, the most innovative practices today use rapid prototyping as a way of design-thinking and not as a way to move more quickly to a final design. This, I would suggest, is how offices like L.A.-based Greg Lynn Form use design animations, how MVRDV in Holland uses "datascapes," and how Crimson and MAX, also from Holland, deploy scenario learning in urban planning. The focus is on the "soft" or flexible, the global, and the networked, three features business sage Kevin Kelly has identified as significant for the emerging new economy.

The managerial disposition sketched above has made a strong break with the avant-garde practices enabled by Rowe's story. It is not simply another intellectual fad or crutch for architecture, however. This break requires that we reexamine the problematic relationship between thinking and doing in architecture, an issue at the heart of the work of Gilles Deleuze, perhaps the last of the great "theory" figures. Deleuze wanted to shift our attention away from thought that tethered us to fundamental truths and toward thought that would enable us to act. But Deleuze was still too much a philosopher to acknowledge the awkwardness of theory when compared to the conceptual athleticism of consultants and business thinkers whom he scorns in the introduction to *What is Philosophy?*, written with Felix Guattari (1991 French edition; 1994 English).

After the end of theory

Just as theory confronted philosophy with its slowness and morality, so today does managerial thought confront theory with its historical connection to the dreams and utopian aspirations of philosophy. Despite the best efforts of his American adherents and "French theory" translators, and indeed despite his own prejudices against management thinking, Deleuze's desire to develop a practical mode of thought free and fast enough to act in the world would never be brought to fruition. No, the freedom of movement so important to Deleuze, and indeed all theorists, will instead be realized by intellectual entrepreneurs and managers of change as they confront the fiercely competitive world thrown up by the forces of globalization.

There is indeed important work to be done in the realm of architectural thinking after the end of theory, *ANY*, *Assemblage*, and the like. But if it is to survive and flourish, this work must focus on time, interactivity, and innovation, and give up its obsession with space, genius, and the utopian search for the new. ■


30-STORY
IJL FINANCIAL
CENTER

Three recent additions to the sparkling uptown of Charlotte, North Carolina were all constructed with Vulcraft composite deck. These steel frame buildings, owned by Bank of America, utilized more than 1,500,000 square feet of composite deck. And for good reason. The strength of the steel deck allows for longer spans which result in the use of fewer beams. This can represent a significant cost saving.



Vulcraft composite deck in combination with normal weight concrete.

With A Little Help From Vulcraft, The Charlotte Skyline Is Getting All Decked Out.



Composite deck is less labor intensive and thus faster and more economical than poured-in-place concrete. And our composite floor system achieves the required UL fire rating for mid and high rise construction. So on your next project if you'd like to speed up construction and drive down costs, look us up. We can help stack the deck in your favor. www.vulcraft.com.

NUCOR
VULCRAFT GROUP

CIRCLE 39 ON INQUIRY CARD

Brigham City, UT 435/734-9433 • Florence, SC 843/662-0381 • Fort Payne, AL 256/845-2460
Grapeland, TX 936/687-4665 • Norfolk, NE 402/644-8500 • St. Joe, IN 219/337-1800

UL FINANCIAL CENTER - DEVELOPER: Trammel Crow Co. - ARCHITECT: Smallwood, Reynolds, Stewart, Stewart & Associates - STRUCTURAL ENGINEER: Stanley D. Lindsey & Associates - GENERAL CONTRACTOR: Beers Construction Co. - STEEL FABRICATOR: Steel Fab, Inc. - STEEL ERECTOR: Williams Erectors

TRANSAMERICA SQUARE - DEVELOPER: The Harris Group - ARCHITECT: Gantt Huberman Architects - STRUCTURAL ENGINEER: Walter P. Moore & Associates GENERAL CONTRACTOR: Shelco Inc. - STEEL FABRICATOR: Steel Fab, Inc. - STEEL ERECTOR: L. R. Wilson

ODELL BUILDING - DEVELOPER: The Harris Group - ARCHITECT & STRUCTURAL ENGINEER: Odell Associates - GENERAL CONTRACTOR: Shelco Inc STEEL FABRICATOR: Steel Fab, Inc. - STEEL ERECTOR: Williams Erectors

17

CATALOG 17
YOUR COMPLETE SOURCE FOR ARCHITECTURAL METAL COMPONENTS

Julius Blum & Co., Inc. is proud to announce the arrival of its Catalog 17. Continuing the tradition of attention to style and detail, Catalog 17 includes product information on our traditional and contemporary metal components in aluminum, bronze, nickel-silver, steel and stainless for use in handrails, elevator cabs, building facades and other architectural applications. Each catalog includes a CD with downloadable CAD drawings. Call, write or e-mail for your **free** copy.



JULIUS BLUM & CO., INC.
P.O. BOX 816 CARLSTADT, N.J. 07072-0816
800 526 6293 WWW.JULIUSBLUM.COM **FAX 201 438 6003**
e-mail: bluminfo@juliusblum.com
CIRCLE 40 ON INQUIRY CARD

Design Vanguard

THIS YEAR'S GANG OF TEN YOUNG DESIGN FIRMS OFFERS INTRIGUING IDEAS OF WHERE ARCHITECTURE IS HEADED. THINK OF IT AS A ROAD MAP TO THE FUTURE.

Looking for patterns in the work of 10 young firms from around the globe is much like taking a Rorschach test: the results say as much about the observer as they do about the architects. But at least to this observer, there seems to be some common ground among the remarkably diverse firms selected by RECORD's editors as the Design Vanguard of 2000.

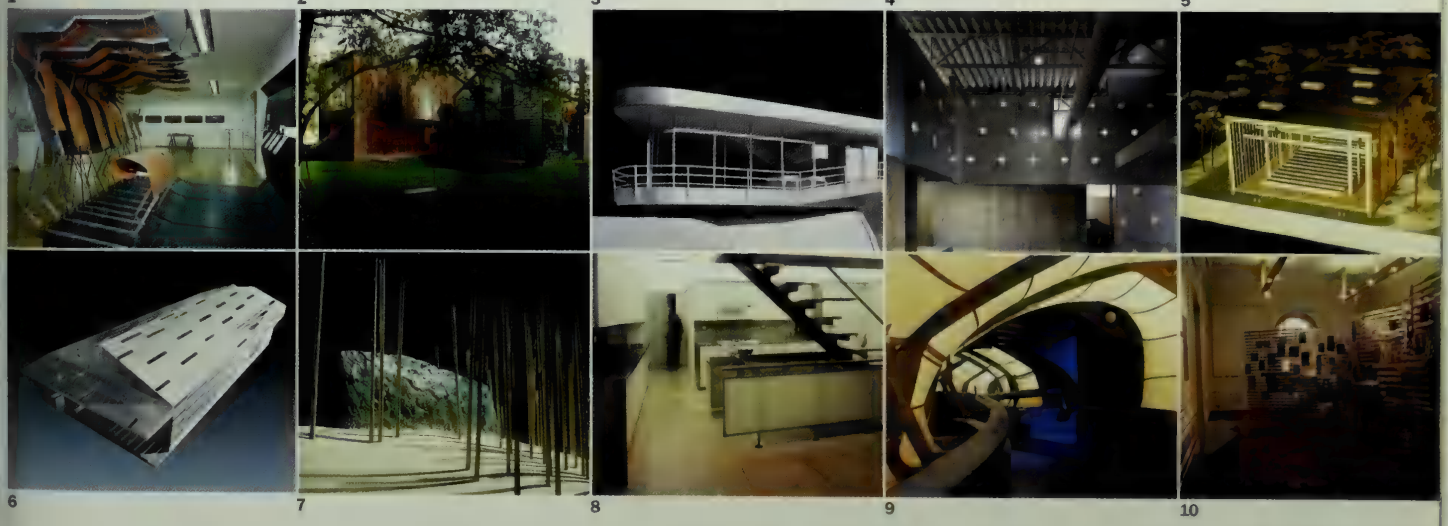
Most important, there is a common concern with the relationship between landscape and the built environment. Individual responses, though, vary—from a poetic hull tucked in the woods and a copper-clad sanctuary surrounded by trees to a brightly colored machine for living and a collagelike house that both reflects and absorbs elements of nature. At the same time, many of the firms are exploring issues of assemblage, lavishing attention on the connections between building elements and devising flexible systems for using standardized pieces. Without necessarily sacrificing the dramatic formal gesture, these architects exhibit a keen interest in the way their work gets built and a desire to get the details right.

The firms featured are:

1. **Garofalo Architects**
2. **Cho Slade Architecture**
3. **Atelier Hitoshi Abe**
4. **Design Office**
5. **John Ronan**
6. **Kuth/Ranieri Architects**
7. **Sanaksenaho Architects**
8. **Lewis.Tsurumaki.Lewis**
9. **Birds Portchmouth Russum Architects**
10. **SHoP/Sharples Holden Pasquarelli**

Inspired by new materials and the complexities of modern society, some of the architects are layering designs to create a series of thresholds or a sequence of skins that alternately reveal and conceal what's happening inside. All sorts of plastics, polycarbonates, and sophisticated glass products are making such strategies possible today. They also give architects the chance to explore issues of privacy and enclosure that have been brought to public attention by museum exhibitions and the intrusions of digital technologies in everyday life.

Like any small sampling, the following group of 10 design firms cannot reflect the full range of work being done by a new generation of architects. But it offers at least a partial view of the talent pool and who's making waves today. The work presented here includes both built projects and jobs that are still on the boards. Three of the firms are foreign, two include identical siblings, several involve married couples, seven have never been published in our pages before, and only one comes from southern California. The firms were selected after RECORD consulted deans of architecture and critics around the country and then reviewed design portfolios. We plan to make an annual event of showcasing emerging voices, dedicating much of our December issue to architects new to our readers. While some deserving firms may not have made it into this year's lineup, we hope they'll be included in the future. *Clifford A. Pearson*





Doug Garofalo transforms the conventional with dynamic forms

By Sarah Amelar

Architect: *Garofalo Architects*
Location: *Chicago, Ill.*
Design staff: *4*
Date established: *March 1992*
Principal: *Doug Garofalo (above)*
Education: *B.Arch., University of Notre Dame, 1981; M.Arch., Yale University 1987*
Work history: *William Graham Associates (Seattle/Vancouver); Kessler Merci Architects (Chicago); Solomon Cordwell Buenz (Chicago)*
Key completed projects: *Derman Residence, Skokie, Ill., 1992; Thronton Tomasetti Engineers Offices, Chicago, 1999; Korean Presbyterian Church of New York (with Greg Lynn FORM and Michael McInturf Architects), Queens, N.Y., 1999; Markow Residence, Prospect Heights, Ill., 1999*
Key current projects: *National Time Museum Exhibit, Chicago Museum of Science and Industry (January 1, 2001); Gosczyzcki Residence, Chicago. (Fall 2001); Manilow Residence, Burlington, Wis., (Summer 2001);* 2001. Design for Space Travel *exhibit, Art Institute of Chicago (March 2001)*
Web site: *www.garofalo.a-node.net*

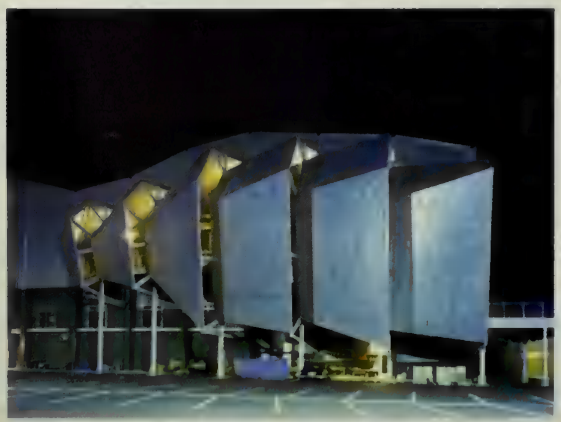
I've never been attracted to an already-established architectural scene," says architect Doug Garofalo, the principal of his own small Chicago firm. "There's no set way to experiment in this city, and I'm happy with that; no current Chicago school or style," he continues. "It's possible to build here, and the ground is still fertile from the city's architectural [heyday] decades ago." Garofalo, who grew up in upstate New York, hadn't envisioned ending up in the Windy City, but soon after his graduate studies at Yale Architecture School, he recognized Chicago as a place where he could practice, build, and teach. He accepted a teaching position at University of Illinois at Chicago School of Architecture 12 years ago, and has since risen to the post of associate professor. Currently he teaches a studio at Yale.

Although handwork and craft have long interested him, he, like many in his generation, has become captivated by the potential of new digital technologies. "Right now," he observes, "technology and the ubiquity of information are just tools—powerful tools—that are everywhere, changing how we do many things. We can now think about spaces and shape them in ways that weren't possible before."

Throughout Garofalo's work, complex geometries fold and bend, departing decisively from the orthogonal. As he puts it, "we're trying to push the envelope of what architecture is formally." In part because he is a relatively young architect, many of his projects have involved existing buildings, which he has transformed. In the Chicago suburbs, he has burst the seams of seven conventional ranch houses, introducing a multiplicity of dynamic forms and intense colors. His designs do not erase what is already there, but provide a potent counterpoint. Similarly, at the Korean Presbyterian Church in Queens, NY, Garofalo collaborated with architects Greg Lynn and Michael McInturf, using bold formal invention to turn a Moderne laundry building into a house of worship.

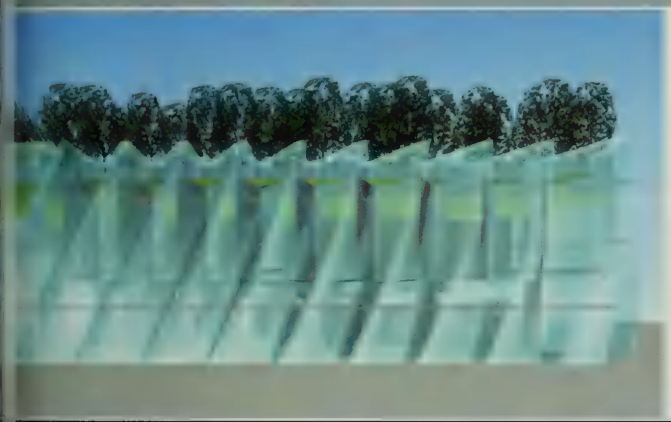
Garofalo's work, which evolves in close collaboration with his staff, has often been characterized as edgy but easy to inhabit and responsive to ethnically complex community settings. The firm has sought to confront weighty and difficult social issues, including Chicago's current housing crisis. In designing the Loess.system temporary housing (unbuilt), for example, the architect proposes an assembly of individual, but interconnected, shelters: a transitional place between true homelessness and more secure housing. An adaptable architecture, with undulating walls, the design reflects the fluid and ad-hoc character of its use. With plantlife and light penetrating the semiporous structures, Loess also attempts to create a hybrid—interconnecting ecosystems, buildings, and landscape.

In all his projects—ranging from transitional housing to a church—Garofalo intends his architecture to be, as he says, "experimental but not removed from reality." ■



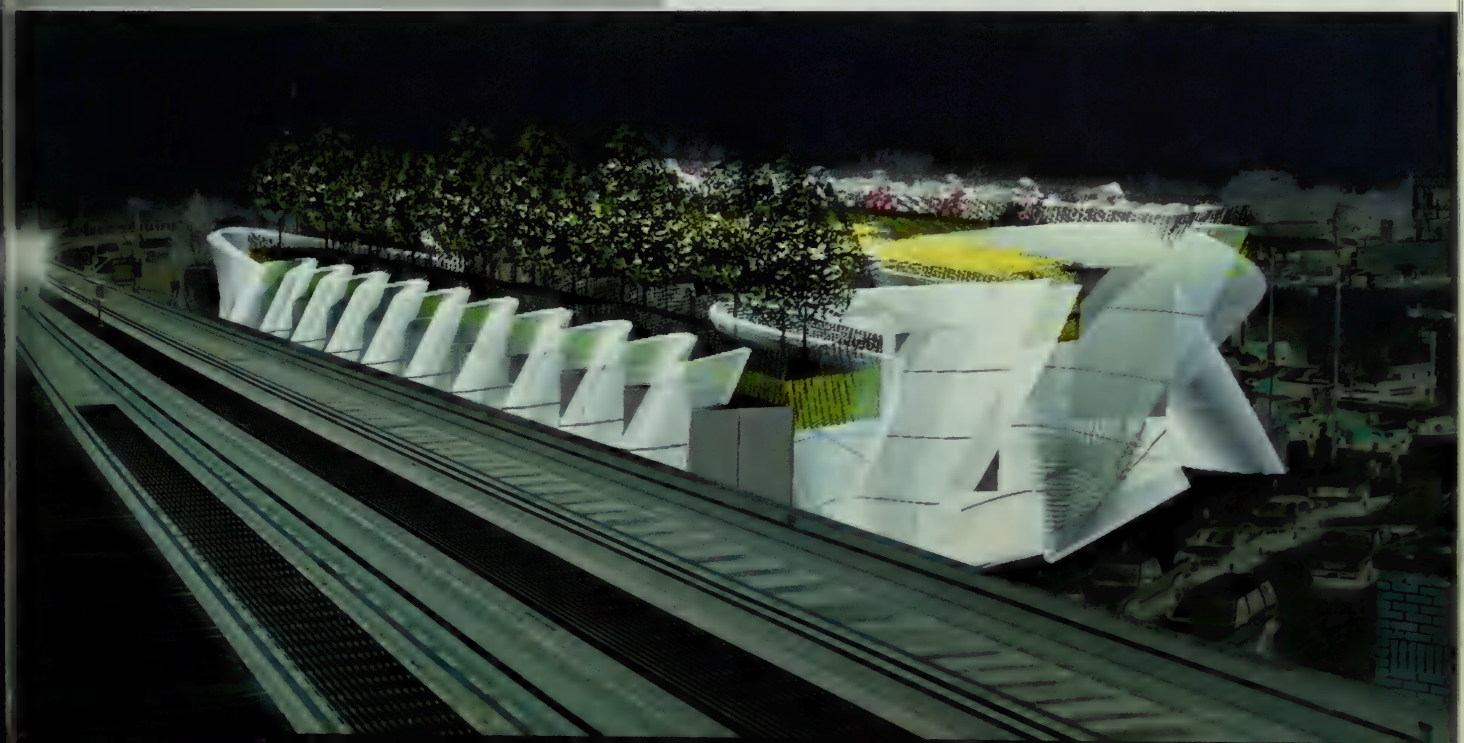
Korean Presbyterian Church of New York, Queens, NY, 1999.





Loess.system
Temporary Housing
Chicago, Ill.

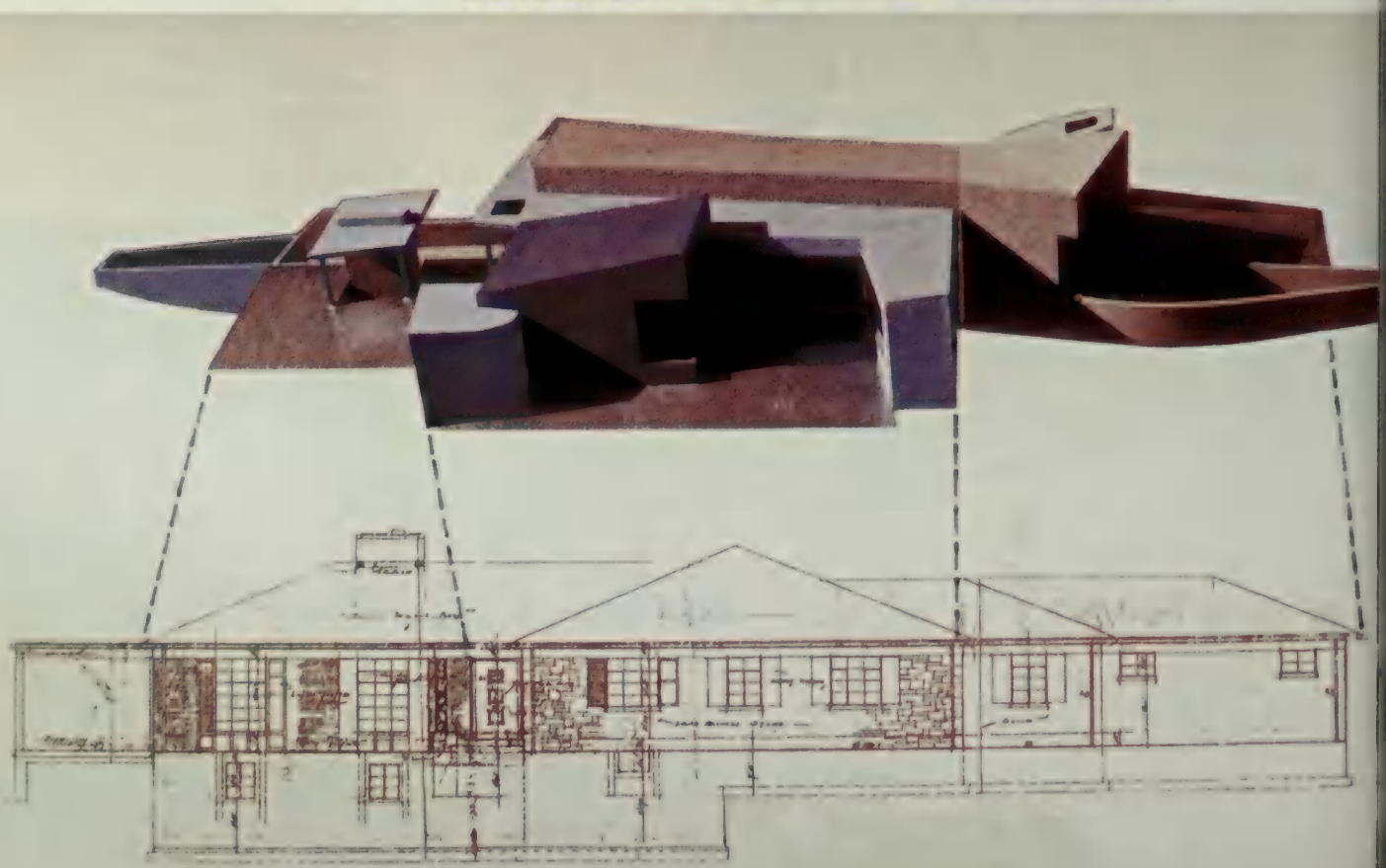
In this yet unbuilt project, Garofalo responds to difficult social conditions, proposing a transitional place between complete homelessness and more permanent housing. A small walkable city of individual but interconnected shelters, this undulating and adaptable architecture reflects the fluid nature of its use. Viewing the landscape as both therapeutic and dynamic, the architect creates a hybrid of natural and built forms.



Chen Residence
Winnetka, Ill.

This renovation and second-story addition to a classic "ranch" house plays off the common practice of "landing" a standardized building and style on a suburban lot with no adjustments to specific site conditions. Adding a level with space for sleeping, bathing, storage, exercise, and outdoor relaxation, Garofalo carefully considered the views and points of entry, as well as the features of its conventional context. The architect has returned repeatedly to suburbia—to complete some seven bold renovation/additions and a few interiors—where he has evolved a vocabulary of form and color that is dynamic and nontraditional but nonetheless site-responsive.

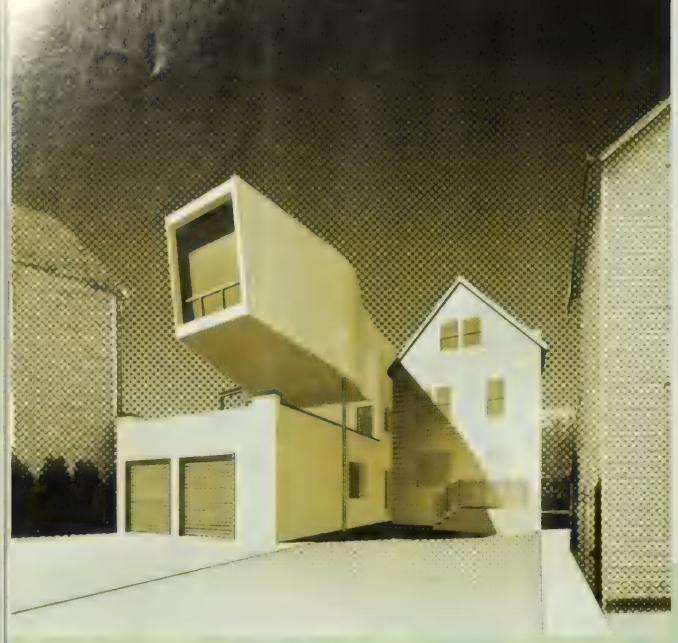












Goszczycki Residence
Chicago, Ill.

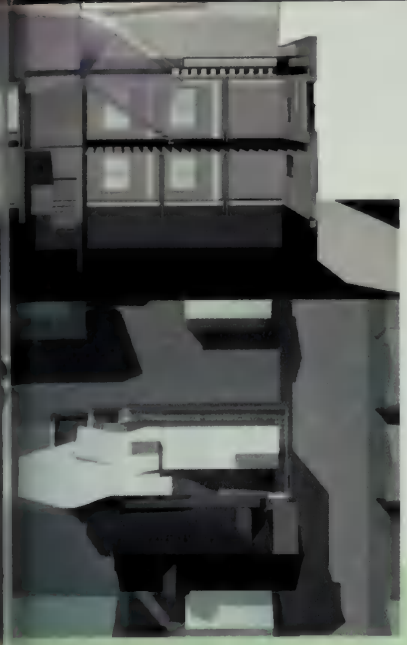
This project began with an eccentric pair of connected buildings: a balloon-frame house joined to a brick structure (a former gear factory) by a below-grade and an above-grade passageway. The odd condition, circa 1927, would not meet zoning codes if erected today, but Garofalo's client, a bachelor, wanted to retain the interconnectedness. Meeting current setback laws, which place upward additions near the lot's center, the architectural strategy became one of extrusion. Extending from the masonry building's existing third floor, a new volume hangs, as if afloat, from a suspension bridge.

Offices of Thornton Tomasetti Engineers
Chicago, Ill.

For this 15,000-square-foot office—an entire floor of the Chicago Information Technology Exchange—the client wanted to project a forward-looking image from one of the city's most technologically advanced sites. Garofalo Architects conceived the interior as a city, designed to channel the efficient flow of people and data through open offices and communal work and conference areas.











PHOTOGRAPHY: © JON MILLER/HEDRICH BLESSING





IN.FOrmant.system
Chicago Museum of Contemporary Art

This full-scale prototype newsstand was originally built for the exhibit "Material Evidence: Chicago Architecture@2000" at Chicago's Museum of Contemporary Art. To consider issues of materiality in relation to a newsstands program, Garofalo seized the opportunity to project digital technology into the public realm. A swarm of zinc-clad enclosures house various time-sensitive, interactive information-disseminating programs.



Cho Slade Architecture combines nature and building in collagelike designs

By Sarah Amelar

Architect: *Cho Slade Architecture*
Location: *New York City*
Design staff: *3*
Date established: *April 1998*
Partners: *Minsuk Cho (above, right), James Slade (above, left)*
Education: *Minsuk Cho—B.S. in architectural engineering, Yonsei University, 1989; M.Arch, Columbia University, 1992; James Slade—B.A., Cornell University, 1988; M.Arch, Columbia University, 1993*
Work history: *Minsuk Cho—Kolatan/MacDonald Studio (NYC); Polshek and Partners (NYC); Office for Metropolitan Architecture (Rotterdam); James Slade—Rick Mather Architects (London); Polshek and Partners (NYC); Richard Gluckman Architects (NYC)*
Key completed projects: *Pekarsky Residence, NYC, December 1999; Williams Residence, NYC, November 1998*
Key current projects: *Illang House, Ansung, Korea (2002); Williams Residence, Seattle, Wash. (2001)*
Web site: *www.choslade.com (currently under construction)*

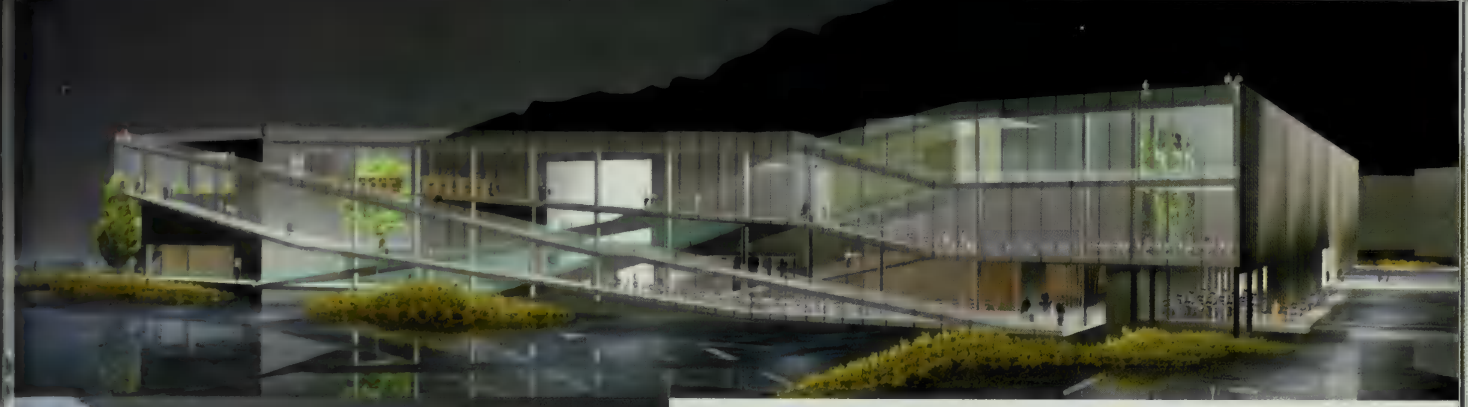
Min Cho and James Slade have compared their architectural works to the large-scale pixellations that television broadcasters sometimes use to abstract and obscure pornographic images or the identities of interviewees. The architects are not likening themselves to censors, but instead underscoring their tendency to leave existing conditions intact but not fully decipherable.

Cho and Slade view the manmade and the natural as a continuum—almost as if their architecture could pass through its filter a discrete area of a larger field condition. In their yet-unbuilt Illang House in Ansung, Korea, for example, readings of the surrounding terrain depend upon how land meets the architecture: As in a terrarium or ant farm, the loose soil of a berm is visible, pressing against window panes. Elsewhere in the project, a mirror on the facade reflects a collagelike swatch of the landscape, while a stream threads beneath the house. And in the Old Residence in New Canaan, Conn., fragmented stone walls, the vestiges of ancient farms that striate the site like phantoms of its past, are drawn out and expanded upon, becoming the salient features of a house addition.

Similar principles of continuity and abstraction apply to the firm's larger-scale projects. When envisioning the city of Paju, South Korea, for a recent architectural competition in which they placed third, Slade and Cho eschewed the idea of creating an idealized image from a *tabula rasa*, supplanting or obliterating the site's topography and other features. "A city does not happen in a day, and one person does not create it," the architects have written. "The city of Paju should evolve from what is currently there: a mountain, empty fields, a wetland, an access highway, a river." Thus a lushly planted ramp weaves its way, like a ribbon of green, into their proposal's built forms.

In Paju and much of Cho Slade's work, temporality plays a key role. Seasonal changes and the circadian rhythms of daily use are factored into the design. At Paju, such infrastructural elements as ramps remain accessible as public meeting spaces after the building closes for the night. And since the competition brief mandated multiphased construction, the architects designed each stage in a way that prevents the project from feeling incomplete or "still under construction" as it progresses. Their scheme accommodates what they call "metamorphic growth"—which they compare to a tadpole becoming a frog—and "incremental growth"—which is akin to a sponge expanding over time.

In the design process, Cho and Slade have evolved a method of computer photographic collage that they say allows them to "develop material characteristics and site conditions as a continuum"—unlike traditional line drawings that tend to accentuate edge or boundary conditions. "People sometimes assume we're computer whizzes," says James Slade. "But, in fact, our method grew out of unsuccessful struggles with [software] Form Zero. We needed to devise a process we could work with, one that really reflected our thinking. We realized that you could look at many designs out there and tell immediately what software they used." Cho Slade's renderings are visually compelling and highly evocative of their abstracted ideas. So far, this young firm has yet to complete any of its ground-up designs, but it will be interesting to see the ultimate translation to built form. ■





Paju Asia Publication, Culture and Information Center
Paju, South Korea

This ambitious competition entry for the city of Paju comprises three phases and 13,000 square feet to include convention and conference centers with a hotel and restaurants. Cho Slade collaborated with the Korean firm of Team Bahn. Their proposal inventively integrates landscape, infrastructure, and architecture with a particular sensitivity to temporality, be it the project's phasing, seasonal changes, or the 24-hour rhythms of use.





Illang House
Ansung, South Korea

Sited at the Illang Mural Museum Complex, the future cultural center of the city of Ansung, Cho Slade's 3,000-square-foot structure will provide a permanent home for the artist Illang and his wife and, someday, a museum of Illang's work. Based on the artist's own diagram, the house splits into separate areas for husband, wife, and guests, further dividing like the branches of a tree.





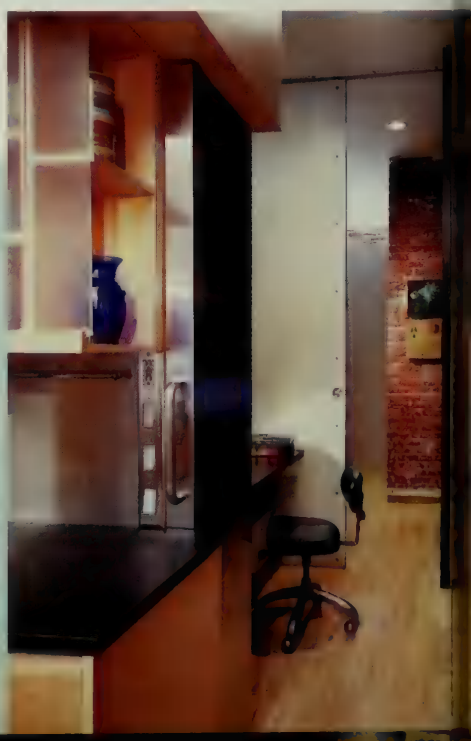


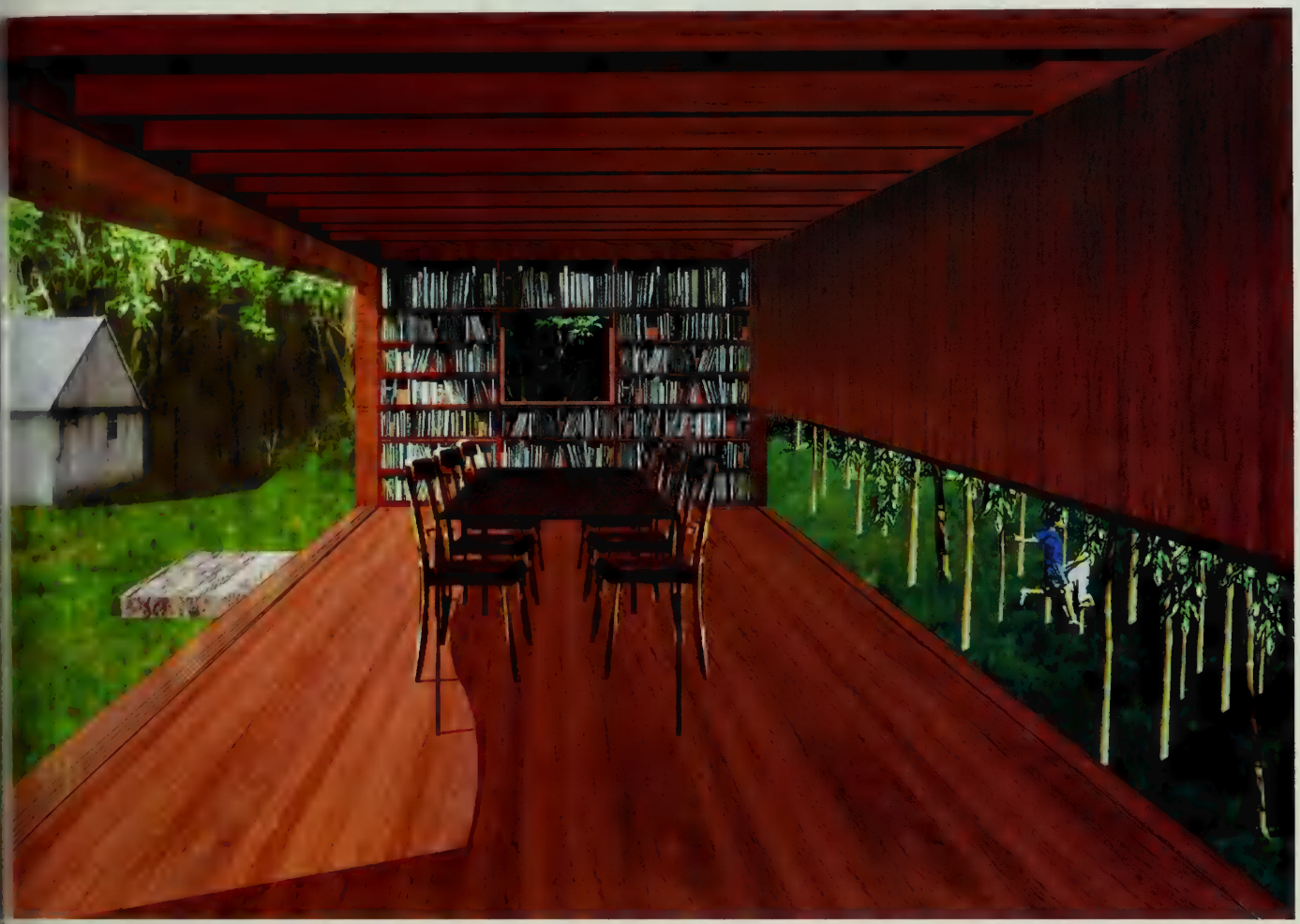
Von Erlach House
Shelter Island, N.Y.

For this summer-house renovation and addition, the clients asked Cho Slade to remove the kitchen and bathrooms, returning the existing building to its original 1880s condition. The addition would instead contain the displaced services, as well as the master-bedroom suite and the far more public family area. The project explores ideas of public and private realms in relation to the landscape.















Pekarsky Apartment
New York City

For this New York City apartment, Cho Slade Architecture designed elegantly compact and streamlined cabinetry that sometimes fits together like the pieces of a puzzle: The sliding stainless-steel "pantry" is essentially a large vertical drawer, and on one side of the kitchen work island, a simple plane punctured by a grid of circular holes offers entry to the "wine cellar." Subtle colors, translucencies, and reflectivities further punctuate the composition. Efficiently tucked behind the kitchen is a long narrow study.



Hitoshi Abe builds an international reputation from a regional base

By Naomi R. Pollock, AIA

Architect: *Atelier Hitoshi Abe*
Location: *Sendai, Japan*
Date founded: *1992*
Design staff: *5*
Principal: *Hitoshi Abe*
Education: *Tohoku University (1985, 1987, 1993); SCI-Arc (1989);*
Work history: *Coop Himmelblau, Los Angeles (1988–92)*
Key completed projects: *Miyagi Water Tower, Shiroishi, Japan (1994); Shirasagi Bridge, Shiroishi, Japan (1994); Yomiuri Media Miyagi Guest House, Zao, Japan (1996); n-house, Tokyo (2000); Neige Lune Fleur restaurant, Sendai (2000); Matsushima Yacht House, Matsushima, Japan (2000); Michinoku Folklore Museum, Kurikoma, Japan (2000); Miyagi Stadium, Rifu, Japan (2000)*
Key current projects: *C-Hair Salon, Tokyo; i-house, Sendai; Matsuda Dental Clinic, Sendai; Miyauchi Dental Clinic, Sendai; Furukawa Ladies Clinic, Furukawa, Japan; Reihoku Community Hall, Kumamoto, Japan*
Web site: *www2.odn.ne.jp/aak47310*

Naomi R. Pollock is RECORD's *Tokyo-based correspondent.*

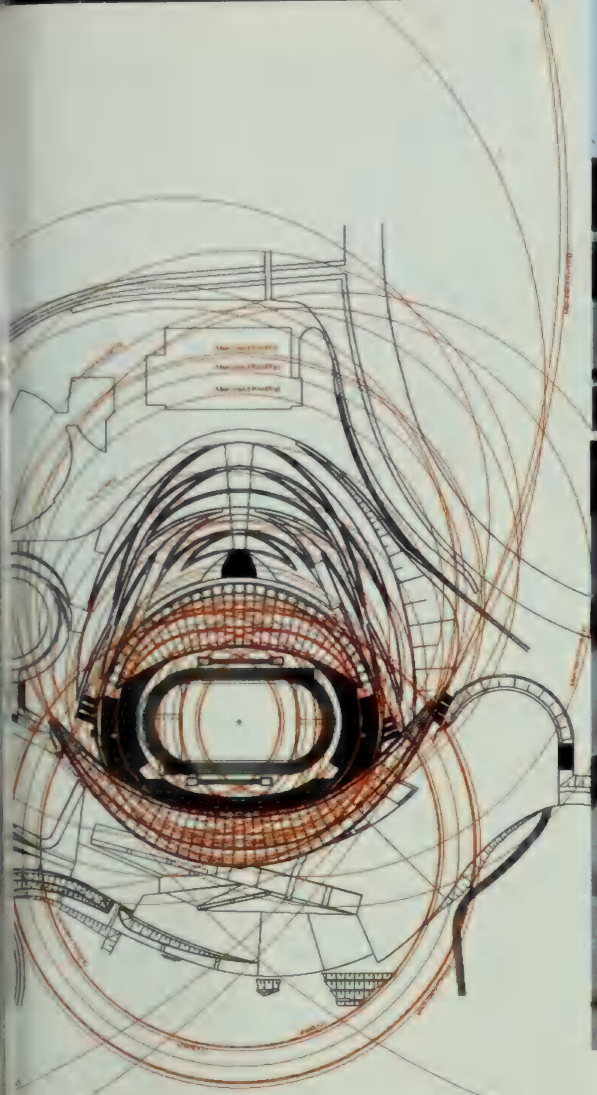
At 30 years of age, Hitoshi Abe won an open competition to design a 50,000-seat, 620,000-square-foot stadium for the city of Sendai, beating out huge construction companies and established design firms alike. So when most of his peers were cutting their teeth at large offices or hoping for that first residential job from family or friends, Abe was working on a reputation-making public project.

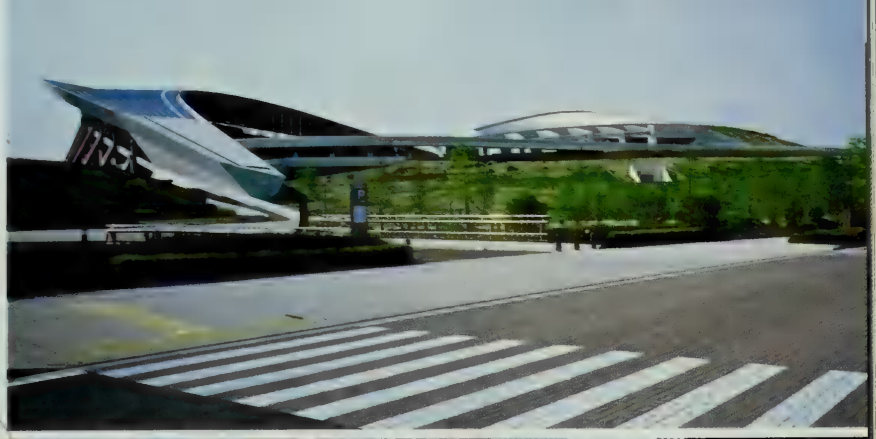
What attracted the jury to Abe's scheme was not only the stadium's dynamic, swirling form, but the way the building melds with its park setting. "We wanted to make a huge, heavy building that is used maybe 10 times a year into something that could also be open, relaxed and a part of local citizens' daily life," says Abe, who collaborated on the project with the local firm Syouichi Hariu Architect and Associates. Nestled into the hillside, the stadium is covered by two swooping roofs, one barely hovering above the ground plane, the other arching skyward. Though the shape and scale of the building are monumental, the skywalk threading through the building was intended to bring dog walkers, joggers, and stroller-toting parents through the building every day.

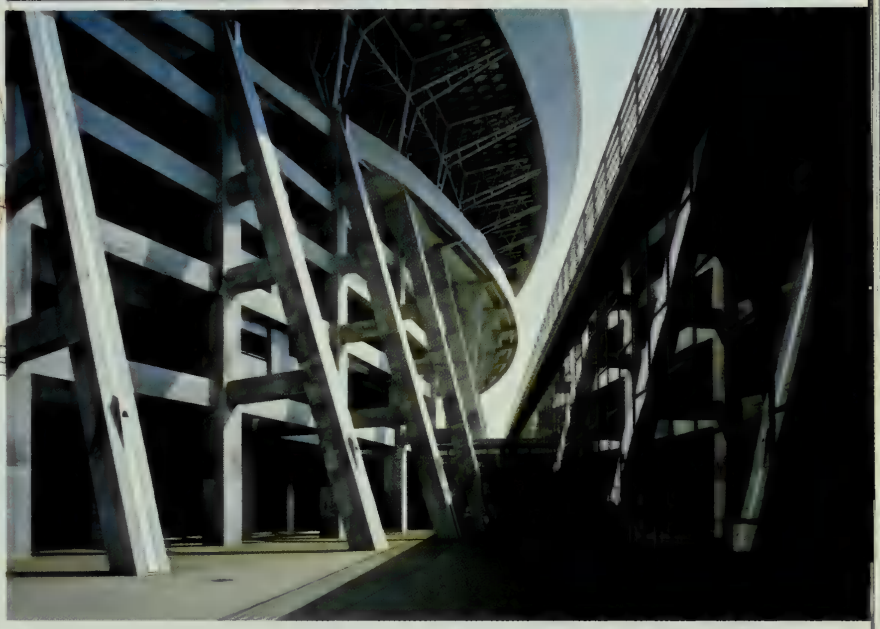
Winning the competition forced Abe to leave Los Angeles, where he was working for Coop Himmelblau, and go home to Sendai, a city of one million, two hours northeast of Tokyo. While most young architects returning from abroad head straight for Tokyo, Japan's architectural mecca, Abe has discovered there are advantages to being a big fish in a small pond. "It is easier for clients to find you in Sendai," he says. And opportunities to build locally have snowballed into commissions all over the country. On his boards at the moment Abe has three hospitals and a house in nearby Miyagi Prefecture, as well as a concert hall in Kumamoto, on the southern island of Kyushu, and a hair salon in Tokyo.

But Abe's success is not simply a function of his geographic isolation. It is as much his irregular geometry, energetic forms, and striking materials that are garnering attention. All are born of his unique brand of process-oriented design that began percolating while he was studying at SCI-Arc. Today he uses shapes as conceptual springboards that are then transformed by very real site constraints and client requests. For example, in designing n-house, a black concrete residence in the Tokyo area, Abe started with a series of square boxes representing rooms on the clients' wish list. The house's unusual curvilinear form resulted when this chain of boxes was compressed and distorted by the site's particularly rigid setback and excavation restrictions, as well as the clients' desire for a driveway up to the house.

With the stadium under his belt, Abe has no pressing desire to undertake another megaproject. And he has no plans to relocate to Tokyo or some other hot spot. Instead, he hopes to use his renown and talents to draw attention to Sendai and other nearby communities through projects such as his recently completed Michinoku Folklore Museum, a renovation of and an addition to a 1933 granary in Kurikoma, a town of 10,000 located one hour from Sendai. Like the design of his buildings, Abe's career to date has not followed any preconceived path. "I didn't plan it this way, it just happened. I am here because I won a competition." But wherever Abe's work takes him next, it is sure to be watched closely. ■







Miyagi Stadium
Rifu, Japan

The winning entry in an open competition, the Miyagi Stadium was designed to integrate the building and its park setting. An arena with seating for 50,000 people, the concrete structure will be one of the venues for the World Cup in 2002 as well as the Japanese National Athletic Games in 2001.



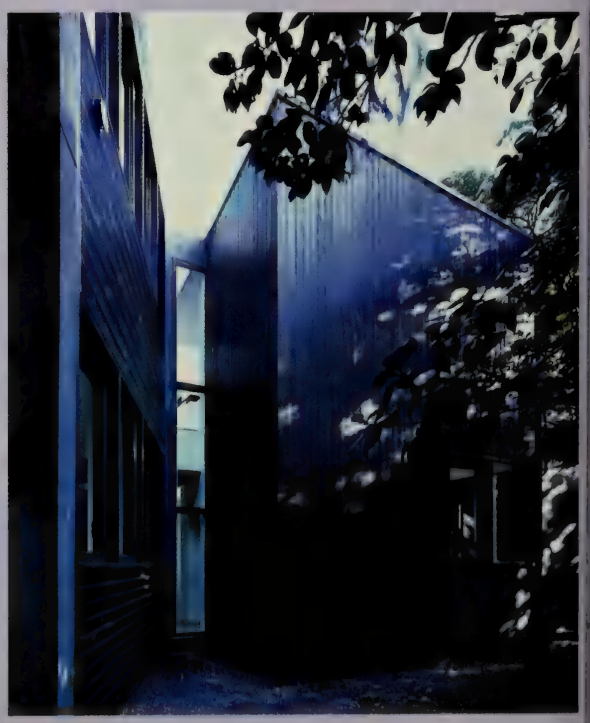




n-house
Tokyo

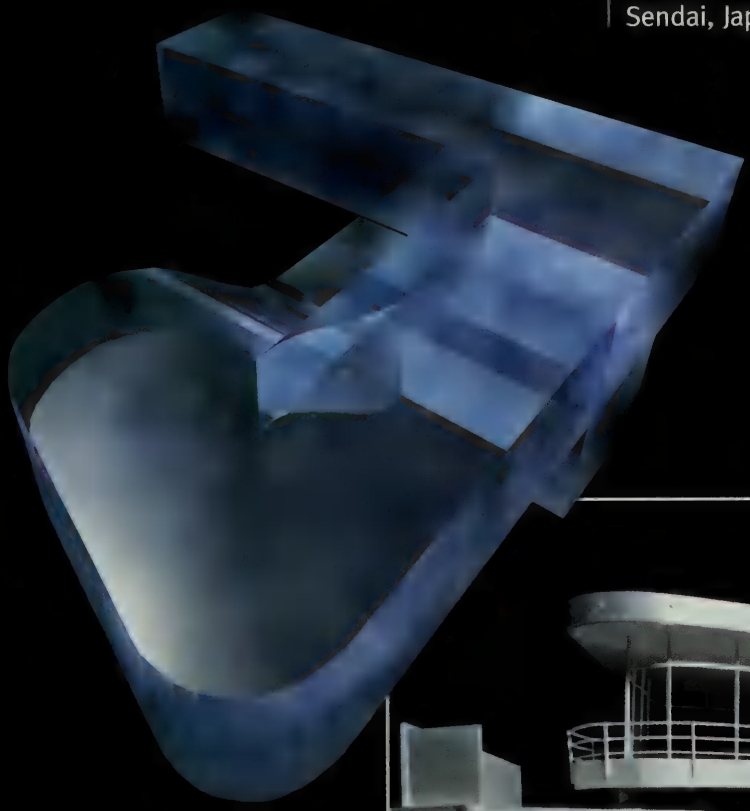
To accommodate a complex program, Abe started with a chain of small boxes, representing different rooms interspersed with voids. He then forced these spaces into the envelope dictated by building and zoning codes. The chain of boxes surrounds an open area containing the entry foyer, a gallery, and a living room that can be used for large gatherings.

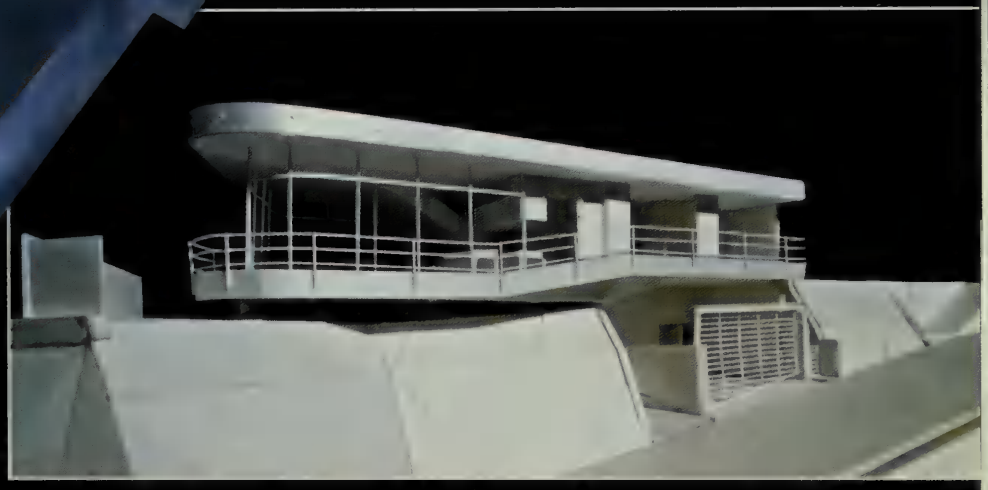




i-house
Sendai, Japan

Now under construction, this 2,260-square-foot house occupies a spectacular site in Sendai with a view to the ocean in the distance. Enclosed almost entirely by glass, the steel-frame house was conceived as a hollow tube to accommodate the client's request for plenty of open space. Site conditions then deformed the shape of the house.

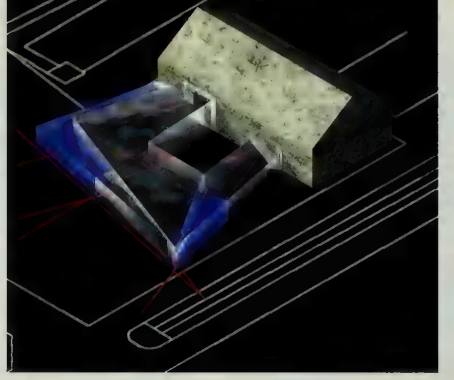


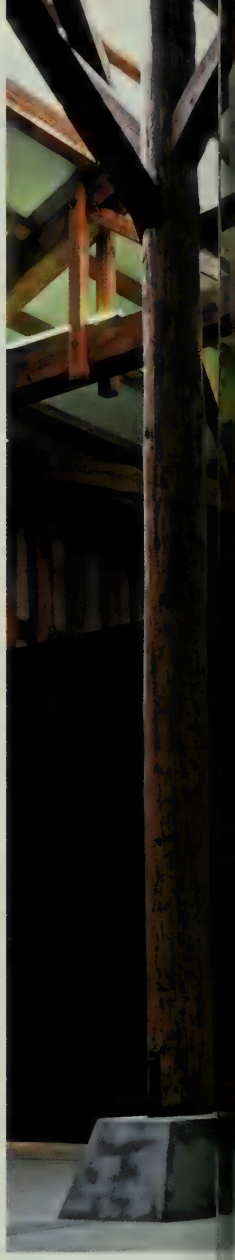




Michinoku Folklore Museum, Kurikoma, Japan

Completed in 2000, the 9,650-square-foot Michinoku Folklore Museum is a renovation and addition to an 80-year-old rice warehouse in Kurikoma, a rural town one hour from Sendai. Designed to draw tourists back to the town center, the museum houses both permanent exhibits and a flexible display area ringing a courtyard.















Design Office incites people to interact with space, light, and materials

By Suzanne Stephens

Architect: *Design Office*
Location: *Los Angeles, Calif.; Vancouver, B.C.*
Design Staff: *7 (Vancouver office run by associate Scott Ramses)*
Date Established: *1997*
Partners: *(left to right) George Yu and Jason King*
Education: *Yu: B.A., University. of British Columbia, 1985; M. Arch, UCLA, 1988. King: B. Arch University of Toronto, 1991; M. Arch Harvard 1996*
Work history: *Yu: Morphosis (1988-91); own studio 1992-97 in L.A. and Vancouver; taught SCI-Arc, UCLA, UBC, University of Texas at Austin. King: Williams, Tsien, Daniel Libeskind, ROTO Architects, Baird/Sampson, from 1991-94; taught UBC, Harvard GSD, University of Texas, Austin, University of Kentucky*
Key completed projects:
Virgin Digital Group/Lost Boys studio, Vancouver, 1997; Nettwerk Productions office and store, Vancouver 1998 Max Studio (store), Las Vegas, 2000; Max Studio, San Diego 2000; IBM e-Business Center, Chicago 2000
Key current projects: *IBM e-Business Center, NYC (2001); own studio, Culver City (ongoing); Max Residence, LA, (undetermined); Novocom Office, L.A., 2001; Burg/Portigal house addition, Culver City, 2002; Max Studio shops, San Jose, Sherman Oaks, Corte Madera, Calif., Chicago, 2001-02*
Web site: *www.dodesignoffice.com*

Although Design Office is primarily located in L.A., you have to go to Las Vegas, San Diego, Chicago or Vancouver (where the firm has a second office) to see its work. Principals George Yu and Jason King, who founded the firm only in 1997, do get around. Both grew up in British Columbia, but their paths did not cross for some time. Yu, who had studied architecture at UCLA and worked for Morphosis, opened an office in L.A. in 1992, and began teaching at SCI-Arc. In 1995 he took a teaching job in Vancouver, where he met King, who had been working at a number of high-profile design firms in New York, Berlin, and LA, after studying architecture at Toronto and Harvard. The two first designed a visual effects studio for Virgin Digital/Lost Boys in Vancouver. Then a year later, in 1998, they completed the headquarters for Nettwerk Records. "A lot of entertainment production studios gravitate to Vancouver," notes Yu. "It's so much cheaper. We were able to build Lost Boys studio at $15 (US) a square foot."

But Canada's economy began to slow down shortly thereafter. When Yu was again offered a job at SCI-Arc, the firm moved its main office to L.A. and began designing retail stores for Leon Max, a Russian-born clothing designer and retailer. Two shops, featuring backlighted translucent white acrylic panels for walls and floors finished in epoxy, have just opened in Las Vegas and San Diego, with a number of others on the way.

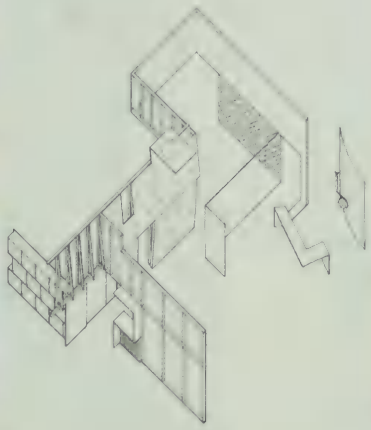
The most compelling aspect of Yu's and King's work involves their use of light and their imaginative investigation of new and sometimes mundane materials. With the Virgin Digital studio, the two architects wanted to redirect, filter, block, and manipulate light through various materials selected for porosity, reflectivity, and plasticity. The two architects worked with the department of metal and materials engineering at the University of British Columbia to create a sheer polyester window covering. Within the covering is embedded a grid of "shape-memory alloy coils," where nickel and titanium wire has been sewn into spandex pockets. When heated by the sun, the coils expand to block light. Another wall in the animation studio reflects and distorts light through multiple lenses made of glass cereal bowls set into plywood and covered with translucent white-acrylic prismatic sheet. "The most fascinating potential of architecture is found in the phenomenological and visceral interaction of a person with the space, light, and material," says Yu.

In the Nettwerk office and store, executed on a slightly higher budget of $26 a square foot, two lobby walls were formed by stacking 70,000 compact discs from the floor to the ceiling. Culled from the company's remaindered inventory, the CDs take recycling to another level. In the 10,000-square-foot IBM eBusiness Center in Chicago, glass kiosks with lenticular coating and plasma screens help shape lounge and lobby areas. The architects are collaborating with artists and scientists, such as a motion graphic company, Imaginary Forces, and an aerospace fabricator for an interactive conference desk. "In architecture the idea of the individual genius has given way to new collaborations," says King "We can move faster, be more fluid, offer a greater range of services, with the highest quality work." ■

Virgin Digital/Lost Boys Studios Vancouver, B.C.

In the 1,500-square-foot visual effects studios Design Office created an animation studio, compositing suite, lounge and screening area, kitchen, and a reception/waiting room. Since controlling sunlight was important, the architects worked with a variety of inexpensive materials, including clear-plastic panels, homosote panels, and even glass cereal bowls as light diffusers embedded in plywood and acrylic in the entrance lobby (left) and lounge (right).







IBM e-Business Centers, Chicago and New York

In designing a 10,000-square-foot briefing center in Chicago and a 6,000-square-foot one near Wall Street for an IBM online business consulting program, Yu and King were able to fully explore new technologies. The conference table (left), executed in collaboration with an aerospace fabricator, will have displays on its surface onto which are projected images from the ceiling. Users can respond with styluses that pick up electromagnetic strokes.



Max Studio clothing stores

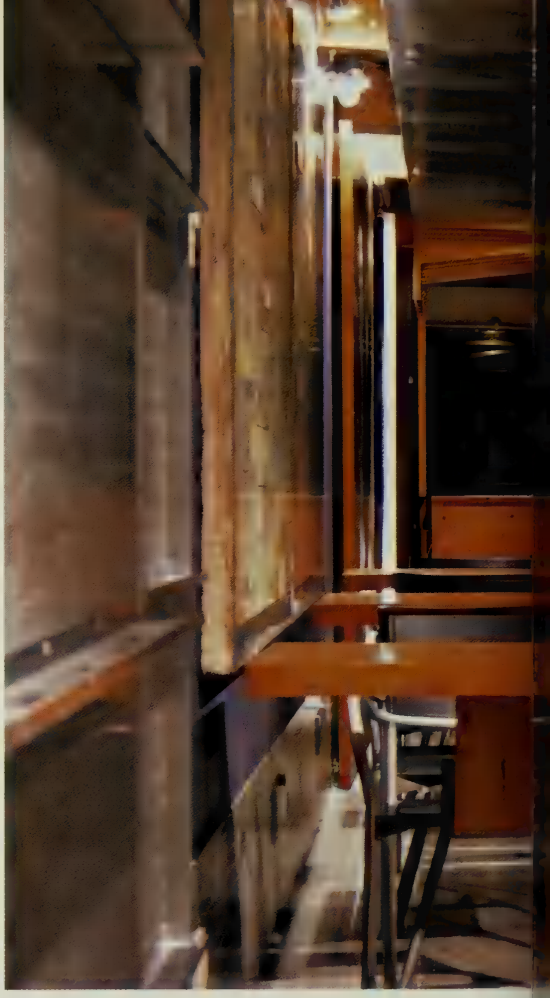
In providing architectural services for a series of clothing stores, Design Office developed a cast resin kiosk (left), in which items may be viewed and ordered from a digital catalogue. The stores themselves, as the one in Las Vegas (below) illustrates, depend on a flexible system (model, bottom) of backlighted acrylic panels that wrap the clothing and accessories in an ethereal, luminescent container.

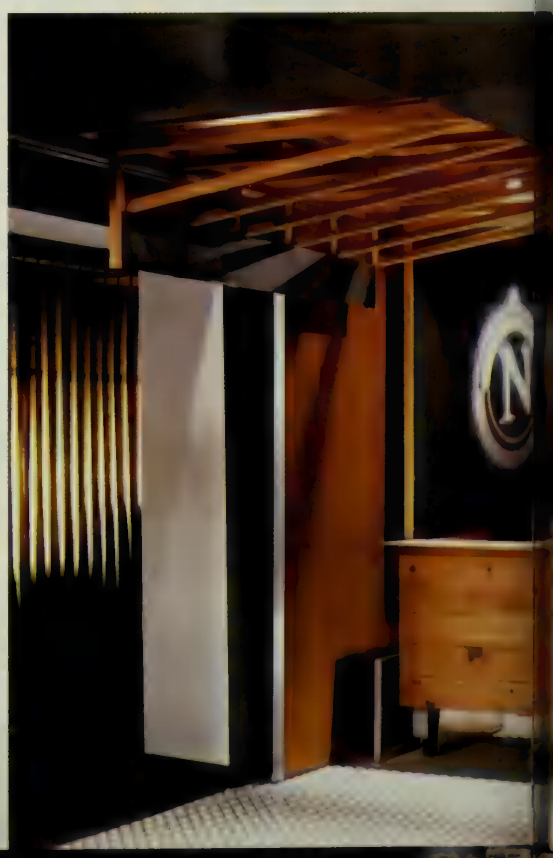




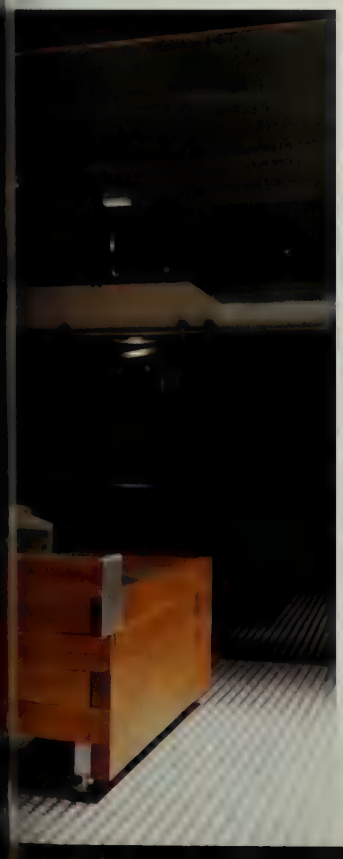




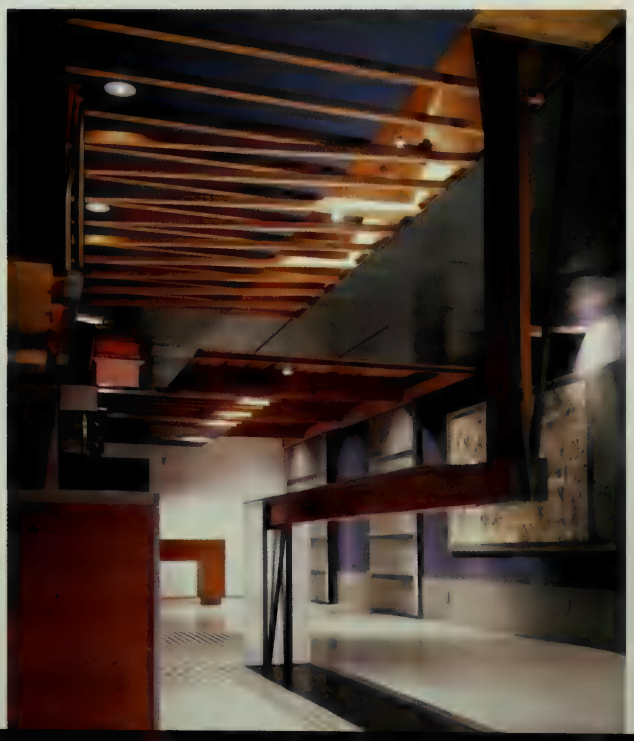








Nettwerk Productions, Vancouver, B.C.



In renovating a 10,000-square-foot space for offices and a store of an independent record label, Design Office had to work with a tight budget of $26 U.S. per square foot. The heavy douglas fir timber furniture used in the front lobby (above), the reception area (far left), and the lounge bar (left) is made of recycled wood left from resizing existing beams.



John Ronan seeks the essence of space in structure and material

By Sara Hart

Architect: *John Ronan*
Location: *Chicago*
Design staff: *4*
Date established: *1997*
Principal: *John Ronan*
Education: *Harvard (1991), Michigan (1985)*
Work history: *Kruek and Sexton Architects, Lohan Architects*
Key completed projects: *Catholic Extension Chapel, Chicago (2000); Caspe Residence, Chicago (1999); Perry Residence, Chicago (2000)*
Key current projects: *Todd Hase Showroom, Chicago; Stroheim and Romann Showroom, Chicago; 620 North LaSalle Street, Chicago (office building); Kaplan Residence, Chicago*

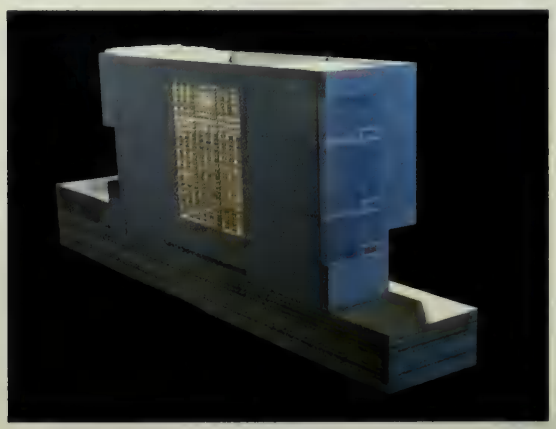
When built, John Ronan's chapel in a secluded wooded area in rural Illinois will stand on concrete piers so as to tread lightly on unspoiled land. In the abstract, the chapel will be a handsome box—a simple structure assembled from a kit of unadorned, engineered wood members essentially limited to posts and panels. The experience, however, will be more complex. Parishioners will park in a lot a fair distance from the site. From there, they will follow a path through the woods to the chapel. Stairs will take them to a platform, which will serve as an informal gathering place, the wooden-deck version of the piazza before the cathedral.

Inside the sanctuary, a simple wooden table will be the only altar. Nature then forms an ever-changing backdrop seen through a glazed wall behind the altar. Ronan maintains the connection between the natural world outside and the devotional one inside with thin glazed reveals between the wall panels that will allow tiny framed glimpses of the woods, while letting in narrow rays of sunlight. This anti-embellishment approach recurs in other Ronan projects, in which the structural members create the space, and the methods of construction produce the details.

"The character of the structure defines the space, not additives applied to the structure," he explains. Be true to the materials is a philosophy that he advocates as a studio critic at the Illinois Institute of Technology (IIT), where students learn about design through materials. First, they design with wood, then masonry, concrete, and finally steel. In some of his residences, Ronan makes a distinction between shell and program. "The shell is permanent, but the program may change many times. I meet the client halfway by giving them the option to add layers to the interior spaces," he says.

Back at the chapel, Ronan applies his collaborative convictions in a slightly different but potent way. He has interpreted the 14 Stations of the Cross as abstract columns, which will be placed along a meandering path through the woods and will encircle the chapel. By drawing the parishioners out of his sacred space into the woods, the architect creates an experience defined solely by the ceremony, rather than the space. As Ronan's practice grows and matures, it will be interesting to see where this ecumenical approach and deference to materials take him. ■

Townhouse in Chicago.



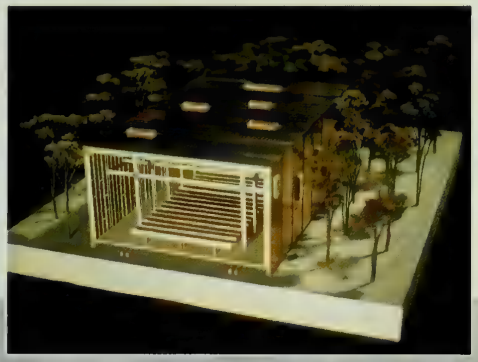




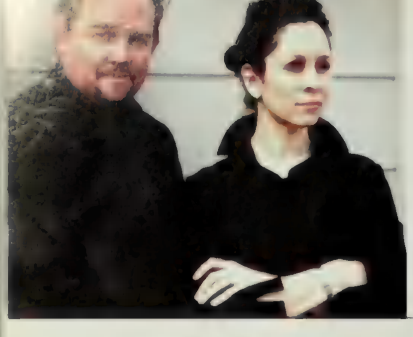
Chapel
Rural Illinois

The church will be framed with parallel strand lumber and enclosed with stressed-skin paneled walls constructed of two sheets of oriented strand board separated by rigid insulation. The exterior will be clad with flat-seam copper sheets, which will weather over time to a blue-green patina. The walls will be constructed on the deck and lifted into place.









Kuth/Ranieri explores the applications and ambiguities of industrial materials

By William Weathersby, Jr.

Architect: *Kuth/Ranieri Architects*
Location: *San Francisco*
Design staff: *7*
Date established: *1990*
Partners: *Byron Kuth, AIA, Elizabeth Ranieri, AIA*
Education: *Kuth—Bachelor of Fine Arts, Rhode Island School of Design (RISD), 1985; Bachelor of Architecture, RISD, 1986. Ranieri—Bachelor of Fine Arts, Bachelor of Architecture, RISD, 1986*
Work history: *Kuth previously renovated historic houses in Boston. Both Kuth and Ranieri teach at the California College of Arts and Crafts.*
Key completed projects: *Greene Residence, Napa Valley, Calif. (1994); LEF Foundation, Napa Valley, Calif. (1994);* Fabrications *installation at SFMOMA, San Francisco (1998); Iann/Stolz Residence, San Francisco (1999)*
Key current projects: *Lerdal Residence, San Francisco (2001); Lodi Bunkhouse, St. Helena, Calif. (2001)*
Web site: *www.kuthranieri.com*

The San Francisco firm Kuth/Ranieri embodies a blend of academic discipline, conceptual art, and tactile architecture, exploring the use of standard industrial materials in unexpected ways. Founded by the husband-and-wife team of Byron Kuth, AIA, and Elizabeth Ranieri, AIA, the firm "grew out of the hothouses of teaching and competitions," says Kuth. Both partners have taught at the California College of Arts and Crafts since 1988 and collaborated on a series of remarkable private houses in San Francisco. They also have made waves with provocative installations at SFMOMA and galleries across the U.S.

"We began to form a single-minded approach to architecture when we first settled into our teaching positions," Kuth says. "Our designs evolve from a fast-sketch dialogue. Our hands talk faster than our brains, so we speak in the medium of drawing."

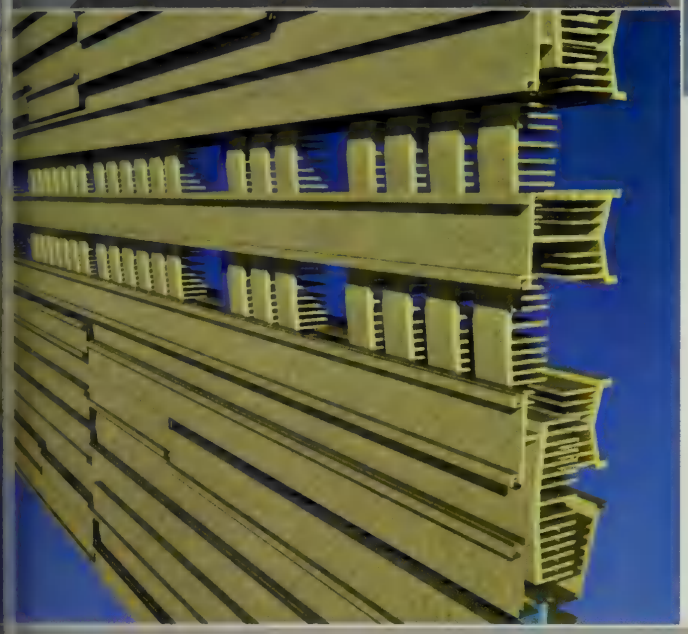
After a career as an acoustic musician, Kuth went to architecture school at the age of 30 in 1983. At the Rhode Island School of Design he met Ranieri, who had previously studied fine art and would continue to bring a painterly approach to their architectural projects. At RISD, both architects were influenced by the work of mentor Rodolfo Machado. His theory of "unprecedented realism," in which standard materials are employed to create unexpected connections between formal and programmatic elements, shares a kinship with Kuth/Ranieri's "interest in appropriating the vocabulary of standardized systems," according to Kuth. "We use common, everyday components and like to destabilize their traditional meaning." For example, the LEF Foundation, the headquarters of an arts organization, features mobile furniture constructed from off-the-shelf components arranged in unorthodox juxtapositions. Blurring the line between furniture and architecture, the anthropomorphic mobile units are functional yet sculptural.

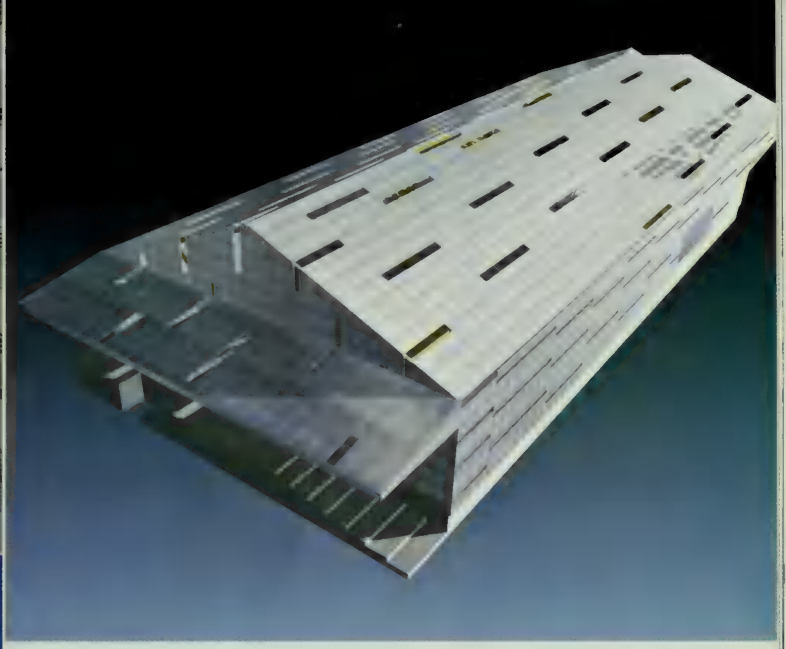
Kuth/Ranieri also investigates ambiguities of material and form in gallery installations. "The Architecture of Repose," part of the *Fabrications* exhibition at SFMOMA, replaced the seamless surface of a gallery wall with an assemblage of industrial-grade felt that imparted the controlled fluidity of a finely tailored garment. Small sections of felt were cinched, clipped, rolled, stacked, and linked with 1,000 aluminum C-clamps to envelop an interior bench where museumgoers could sit. "Felt is a soft and floppy material, but we wanted to transform it into something tectonic, a form with a significant structural rigidity," Kuth says.

The firm primarily has built houses, they explain, because "homeowners are often more adventuresome clients." A recent interest in tackling issues of architectural skins and membranes has been expressed in projects such as the Lerdal Residence. Set in San Francisco's fog-enshrouded Presidio Park, the house features a curtain-wall facade sheathed in translucent glass meant to capture the changing light—an expression of the clients' extensive collection of photography. "Like the film behind the camera's lens, the diaphanous screen of the facade records and indexes the changing phenomena of site and circumstance," Kuth says. "It furthers our investigations of going beyond static surface." ■

RECORD contributing editor William Weathersby, Jr., is a writer in Westport, Conn.







Lodi Bunkhouse
St. Helena, Calif.

An existing industrial shed will be converted into temporary housing and studio space for artists in residence. The 6,000-square-foot facility includes sleeping quarters and studios for four artists, communal areas for intimate or larger public gatherings, and additional studios. The wood-frame shell is clad in metal siding. Interior extrusions are composed of factory-formed resin and recycled wood products.



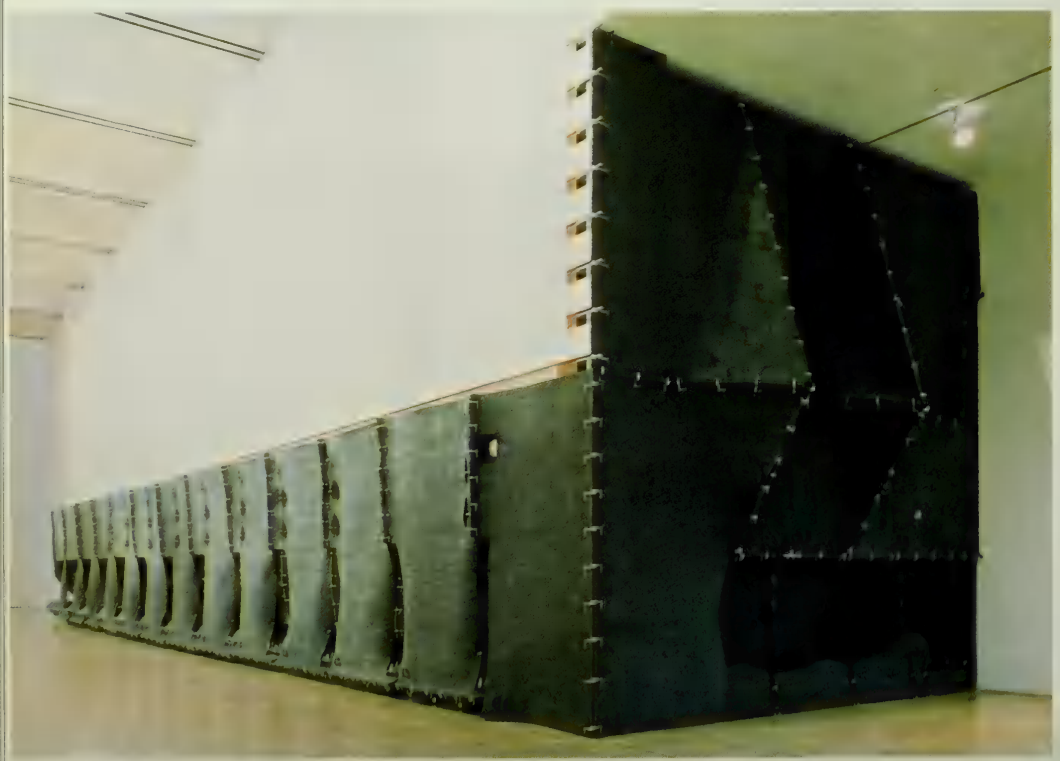




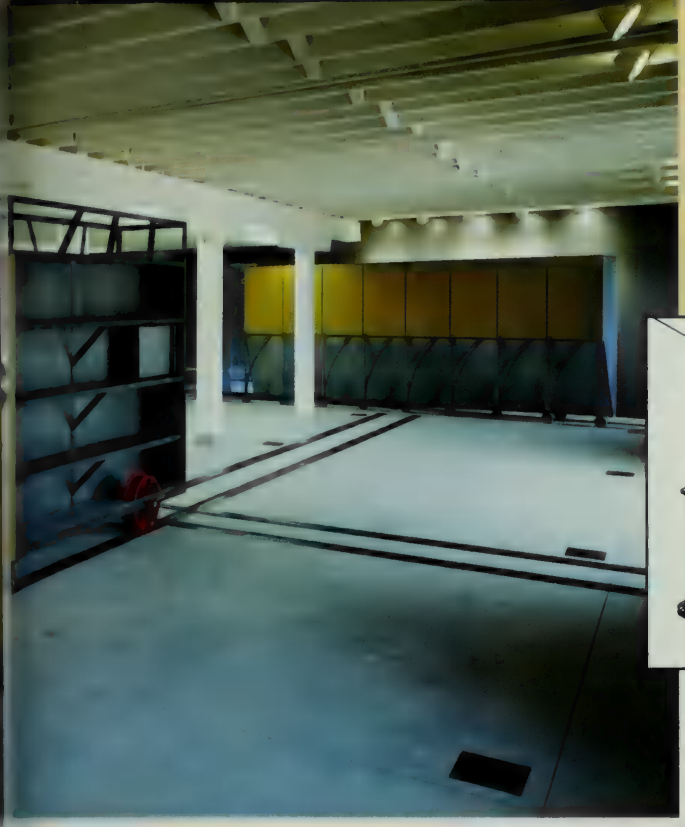


Fabrications
SFMOMA

"The Architecture of Repose," an installation in the *Fabrications* exhibition, exploited the program of a gallery viewing bench. "The occupants fall into a veiled environment of shadow where sensations of sound and light are softened and the view is privileged," wrote Ranieri. Sections of felt were fastened around an excavated wall cavity that exposed studs, columns, exterior concrete panels, and mechanical systems.

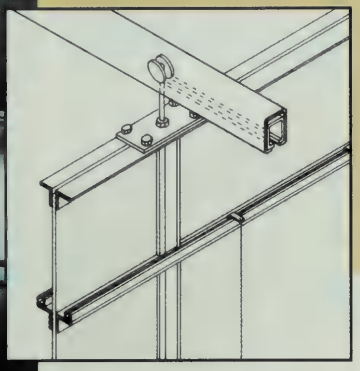


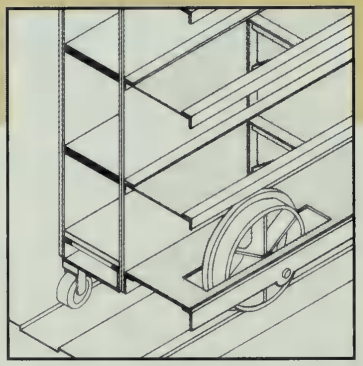




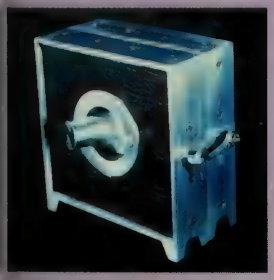
LEF Foundation
Napa Valley, Calif.

The headquarters of the LEF Foundation is housed within a century-old stone winery building. The program called for a library, director's office, conference room, gallery, and support spaces. Mobile units built from stock components—file cabinets, truck locks, movable panels—glide on tracks in the floor. The units are artful objects, while allowing flexible space configurations.

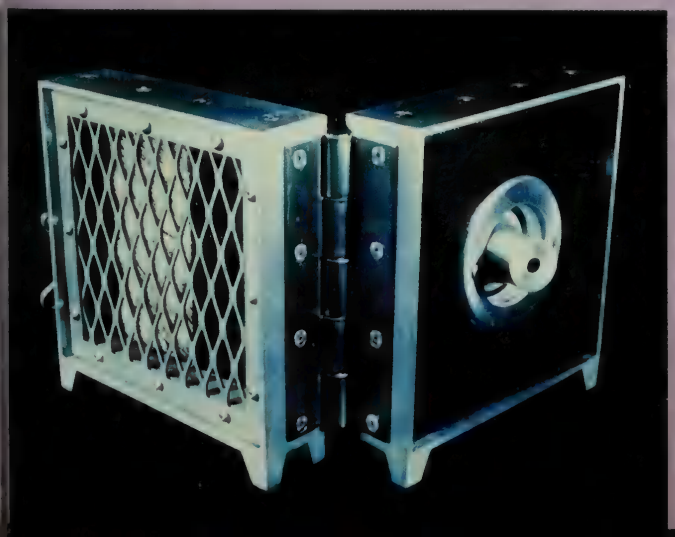




"Industrial Fetish"
Rena Branston Gallery



Part of an art exhibition called *Sex Sells*, a show designed to raise awareness for AIDS research, the construction represents "an inquiry into the nature of the industrial impulse," says Ranieri. "Our goal for the project was to reduce and assemble industrial materials and ready-mades into a series of signs that collectively narrate containment, territory, voyeurism, and paranoia."





E Box
SFMOMA Collection

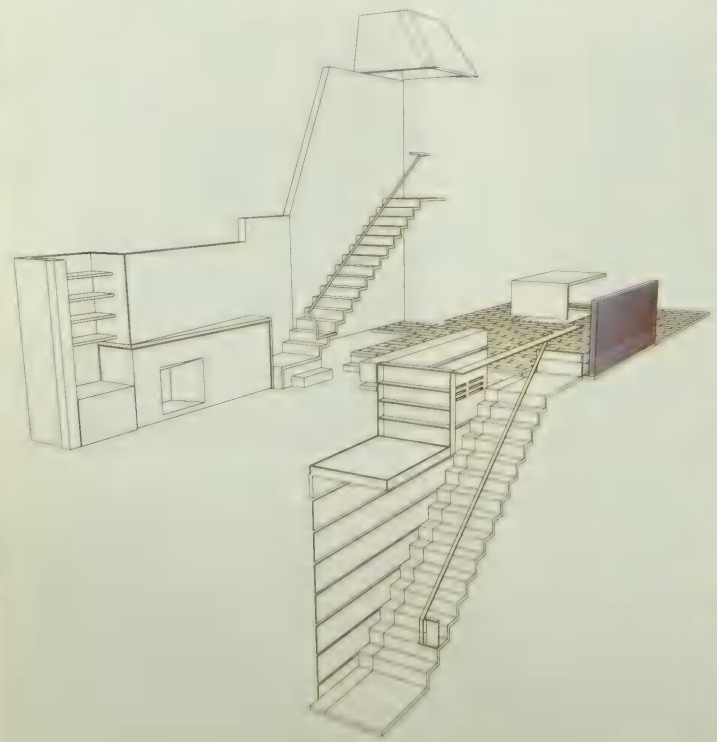
Designed by Kuth for Ranieri, the maple and mahogany jewelry box explores "the reciprocal relationship established by transporting the jewelry between this inanimate body and one's own body," Kuth says. The anatomy of the object, with four velvet-lined pullout trays, is based on the geometry of a square yielding a constant reference point for the individual elements.

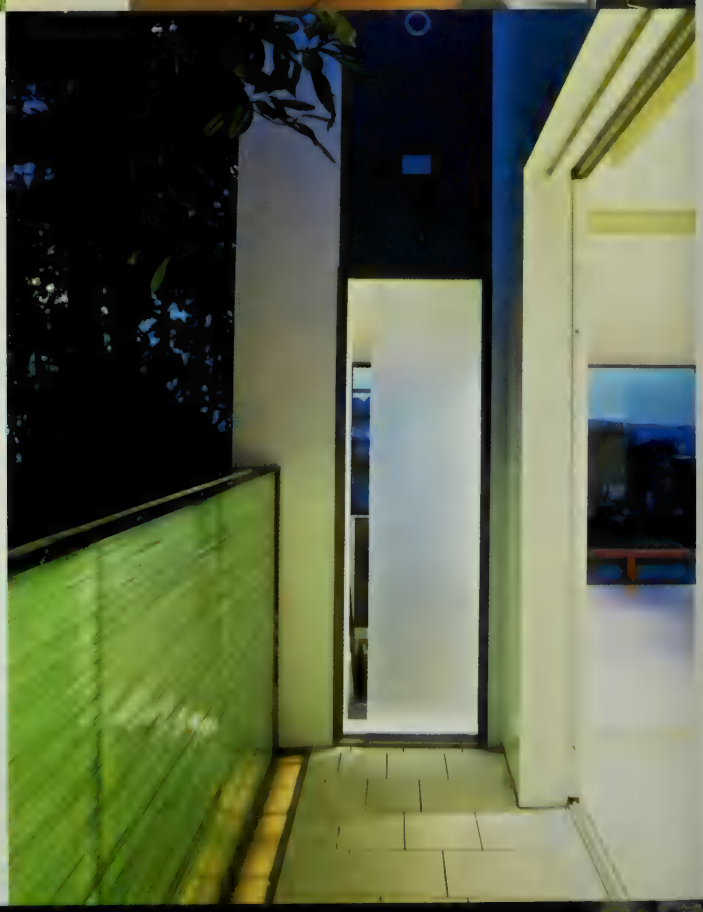


Iann/Stolz Residence
San Francisco

The renovation of an 1,800-square-foot single-family house folds typical Bay Area residential building elements—bay window, front-facing garage door, roof deck—into an assembly of clear-sealed mahogany panels and ledges. The facade's slats become smaller in scale and the battens that divide them become closer as they rise toward the cornice/railing. Interior planes incorporate stucco, limestone, and maple.

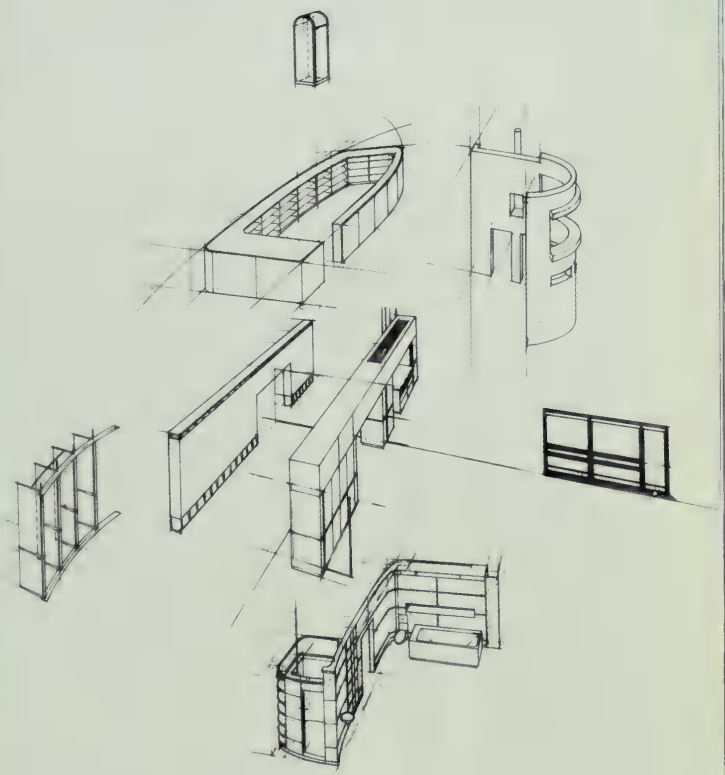












Greene Residence
Napa Valley, Calif.

Industrial components include a commercial loading elevator accessing the second level of a loftlike living space built within the converted stone winery that also houses the LEF Foundation. Cabinetry is constructed of lacquered fiberboard and steel. A concrete tower was added to accommodate a salon on the upper floor and a garden library at ground level. Interior space is defined via adjacency rather than enclosure.





Sanaksenaho Architects attunes its designs to both nature and modern life

By Sarah Amelar

Architect: *Sanaksenaho Architects*
Location: *Helsinki, Finland*
Designer staff: *4*
Date established: *1991*
Partners: *Matti Sanaksenaho (above, left) and Pirjo Sanaksenaho (above, right)*
Education: *Matti Sanaksenaho—architectural degree, Helsinki University of Technology, 1993; Pirjo Sanaksenaho—architectural degree, Helsinki University of Technology, 1993*
Work history: *Matti Sanaksenaho—Monark partner (Helsinki); Kai Wartiainen Architects (Helsinki); Pirjo Sanaksenaho—Kari Jarvinen & Timo Airas Architects; Petri & Severi Blomstedt Architects; Raili & Reima Pietila Architects*
Key completed projects: *Finnish Pavilion, Expo '92, Seville, Spain (Matti Sanaksenaho with Monark); Student Housing, Vaasa, Finland, 1999*
Key current projects: *Chapel, Turku, Finland; Tammimäki House, Espoo-Lippajarvi, Finland (2001)*
Website:
www.personal.eunet.fi/pp/sanaks (currently undergoing redesign)

Matti Sanaksenaho first appeared on the architectural world's radar screen at the age of 23, when he and four architecture schoolmates, collectively known as Monark, won a competition for the Finnish Pavilion at Seville's Expo '92. Their design consisted of two simple sculptural volumes—the wooden "Keel" and steel-clad "Machine"—separated by a narrow chasm. Monark disbanded soon after the Expo, but Sanaksenaho's own small Helsinki firm, formed in partnership with his wife, Pirjo, carried forward the exploration begun in Seville. Their quiet architecture, attuned to both nature and modern life, emerges distinctly from Finland's strong architectural culture.

Like the Machine and Keel, each of Sanaksenaho Architects' projects evolves from a strong metaphor. "We start with an 'empty table,'" says Matti. "And immediately the reality of what's on the table—facts about the site and the client—generate the first move." The idea that will ultimately guide each project emerges through freehand sketches, "not from words," he adds. "It's subconscious. . . like carving a piece of wood with a knife." The precise forms and the words come later.

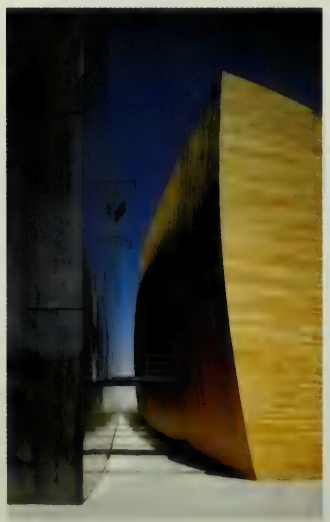
For a yet-unbuilt chapel in Turku, Finland, the architects designed a modest wooden form with a ribbed interior that abstractly evokes the hull of a ship or the belly of a great fish or whale: symbols not coincidentally appropriate to Judeo-Christian lore and traditions. And in Tammimäki House, the Sanaksenaho family's own home, currently under construction, a simple timber-clad volume curves to embrace a sloping landscape, becoming what the architects describe as a "womblike" sheltering form. For interiors of the Designor housewares shops in Helsinki and Stockholm, the architects used wood extensively, with walls and ceilings that cant and curve, folding and flowing into one another, to produce what they envisioned as an "interior landscape."

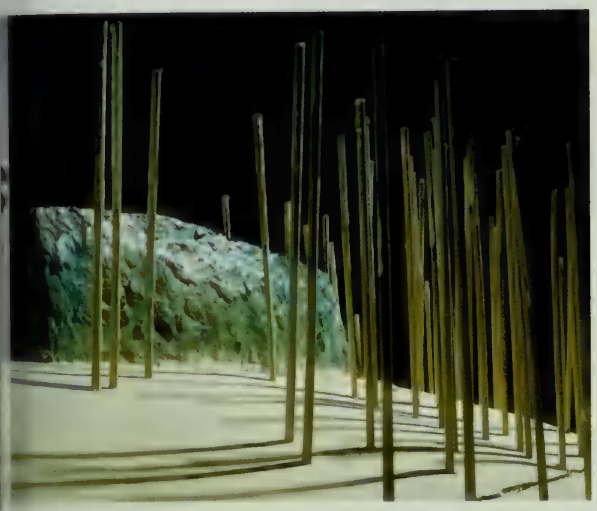
Connecting to nature through forms, moods, play of light, and materials—even in an urban setting—may seem "romantic and old-fashioned," says Matti, but he argues that, in fact, modern technologies make it possible to return to nature. "With the Internet, E-mail, mobile phones, etc.," he explains, "you can as well work and live in the middle of nature as in a city. You now have the possibility to choose."

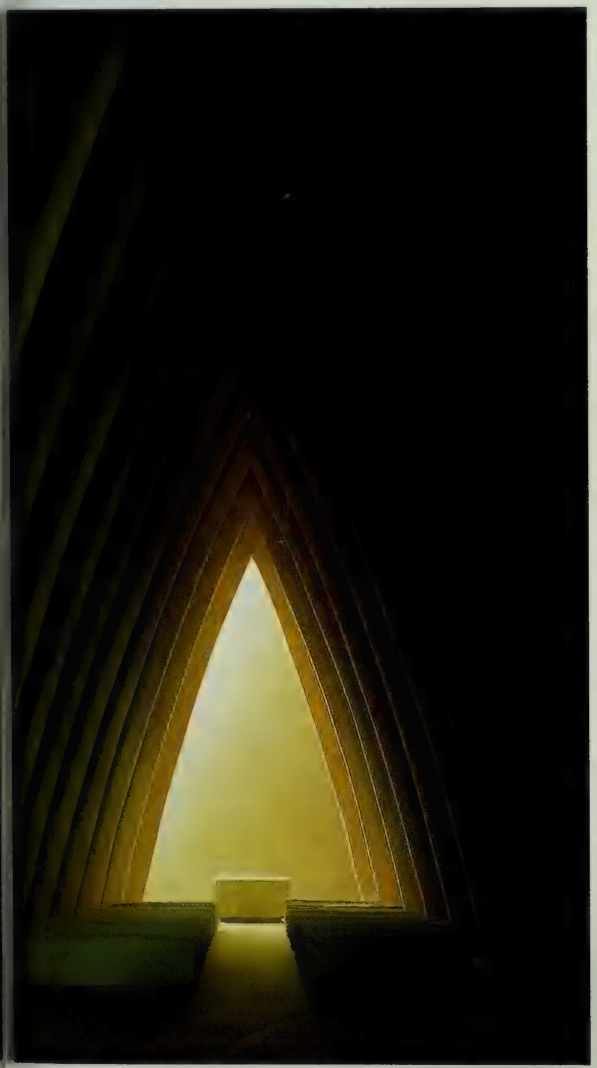
The firm's largest and most urban project to date is the student housing at a new university in Vaasa, Finland. Within an old flour mill and their own new building, the architects have accommodated a cafeteria, students' theater, common areas, and apartments. As in other Sanaksenaho projects, this urban work emphasizes natural materials—brick and timber—and their detailing. Even in this densely built setting, the architects were careful to create public outdoor meeting spaces: green courtyards as places to pause.

Although Matti Sanaksenaho himself continues to draw only by hand, computer technologies ultimately extend his firm's range of buildable forms. "All the necessary technological solutions exist in our buildings, but our goal is that they remain hidden. They don't play the main role. On the other hand, sometimes [as in the chapel], we leave the structure totally visible on the inside of a building, revealing the tectonics of the architecture." ■

Finnish Pavilion, Seville Expo '92







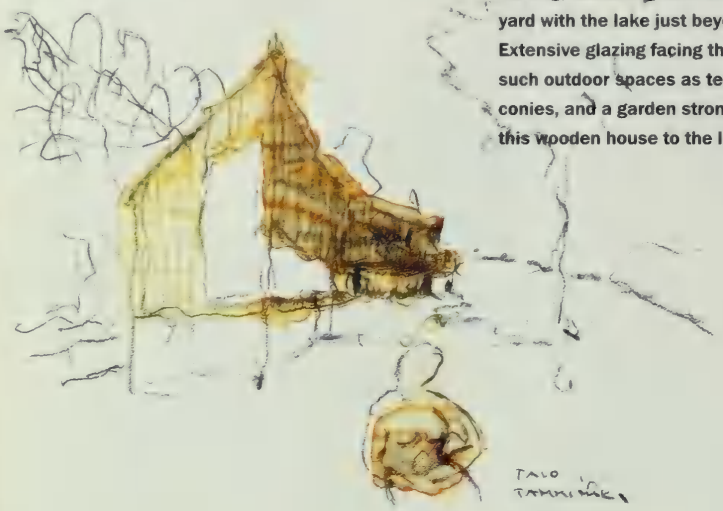


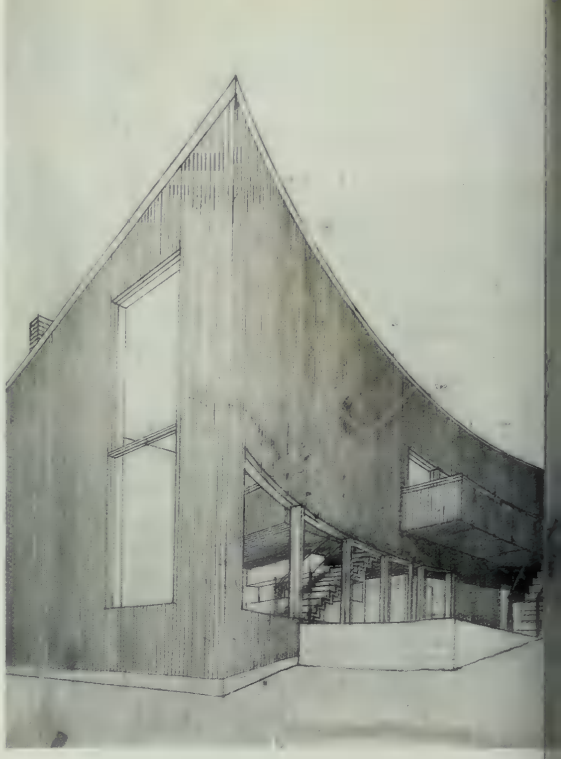
The Chapel
Hirvensalo
Turku, Finland

This chapel, designed in 1995 and awaiting construction, will stand on a forested hill on the island of Hirvensalo. Both exterior and interior forms and structure—especially the internal wooden ribs—will quietly and abstractly evoke the hull of a boat or the body of a great whale or fish. While the interior—contrasting light and shadow—will be mysterious, the green patina of the copper cladding will harmonize with the surrounding trees.

Tammimäki House
Lippajärvi, Finland

Sited on a sloped peninsula jutting into a lake near Helsinki, this house (currently under construction) was designed for the architectural partners themselves and their children. The building's curving, sheltering form embraces the yard with the lake just beyond it. Extensive glazing facing the water and such outdoor spaces as terraces, balconies, and a garden strongly connect this wooden house to the landscape.





The Empty Space
Saarijärvi, Finland

Designed in 1993 as part of Matti Sanaksenaho's architecture school thesis project, *The Empty Space* is both a building and a sculpture. It was erected in the dense forest of Saarijärvi, Finland, on the grounds of Tapper Art Institute, where an international array of artists come to live and develop ideas in an extraordinary natural setting. This wall with its tiny hinged door/window, and single small enclosed space behind it speaks of fundamental qualities of architecture and landscape.







Student Housing
Vaasa, Finland

At the new university of Vaasa, on Finland's west coast, this project provides a cafeteria, student theater, study areas, and apartments. Combining buildings from the 19th century and 1950s with new construction, the architects rendered a city-within-a-city in brick and timber. They were careful to offer respite from urban density with such features as a central courtyard and a rooftop sauna with views of the sea.

Designor Shops
Helsinki/Stockholm



The client, Designor Shops, which carries high-quality and clean-lined Nordic household goods, sought a new image for its stores. The architects responded with folded planes that define a continuous wood-lined interior landscape, providing a backdrop and scale for the objects on display. The design follows the story of a ceramic cup from the kiln to the human hand.



Lewis.Tsurumaki.Lewis explores ways of making the familiar strange

By Suzanne Stephens

Architect: *Lewis.Tsurumaki.Lewis*
Location: *New York City*
Design Staff: *3*
Date established: *1992*
Partners: *(left to right) Paul Lewis, Mark Tsurumaki, David J. Lewis*
Education: *Paul Lewis—B.A. Wesleyan University, 1988, M. Arch. Princeton University School of Architecture, 1992; Mark Tsurumaki—B.S. University of Virginia, 1987, M.Arch Princeton University School of Architecture, 1991; David J. Lewis—B.A. Carleton College, 1988; M.A., Cornell University, 1992, M.Arch. Princeton University School of Architecture, 1995*
Work history: *Paul Lewis—Diller & Scofidio, New York (1993–97); Tsurumaki—Joel Sanders Architects, New York (1991–97), currently teaches at Parsons School of Design; David J. Lewis—Daniel Libeskind Architect, Berlin (1993), Princeton Architectural Press, New York (1994), Peter Guggenheimer, Architects (1995–96), joined firm in 1996*
Key completed projects:
Geltner/Parker loft, New York City, (2000), Copernicus Books, New York (2000), Everest Partners offices, New York (1999), Van Alen Institute, New York, (1998), Princeton Architectural Press (1998), and Happy Mazza Media Co. (1998)
Key current projects: *Lo Zoo restaurant/bar, New York; Architectural League offices, New York; residence, Ithaca, N.Y.; curating and designing exhibition* Architecture + Water, *for Van Alen Institute, New York*
Web site:
www.lewis-tsurumaki-lewis.com

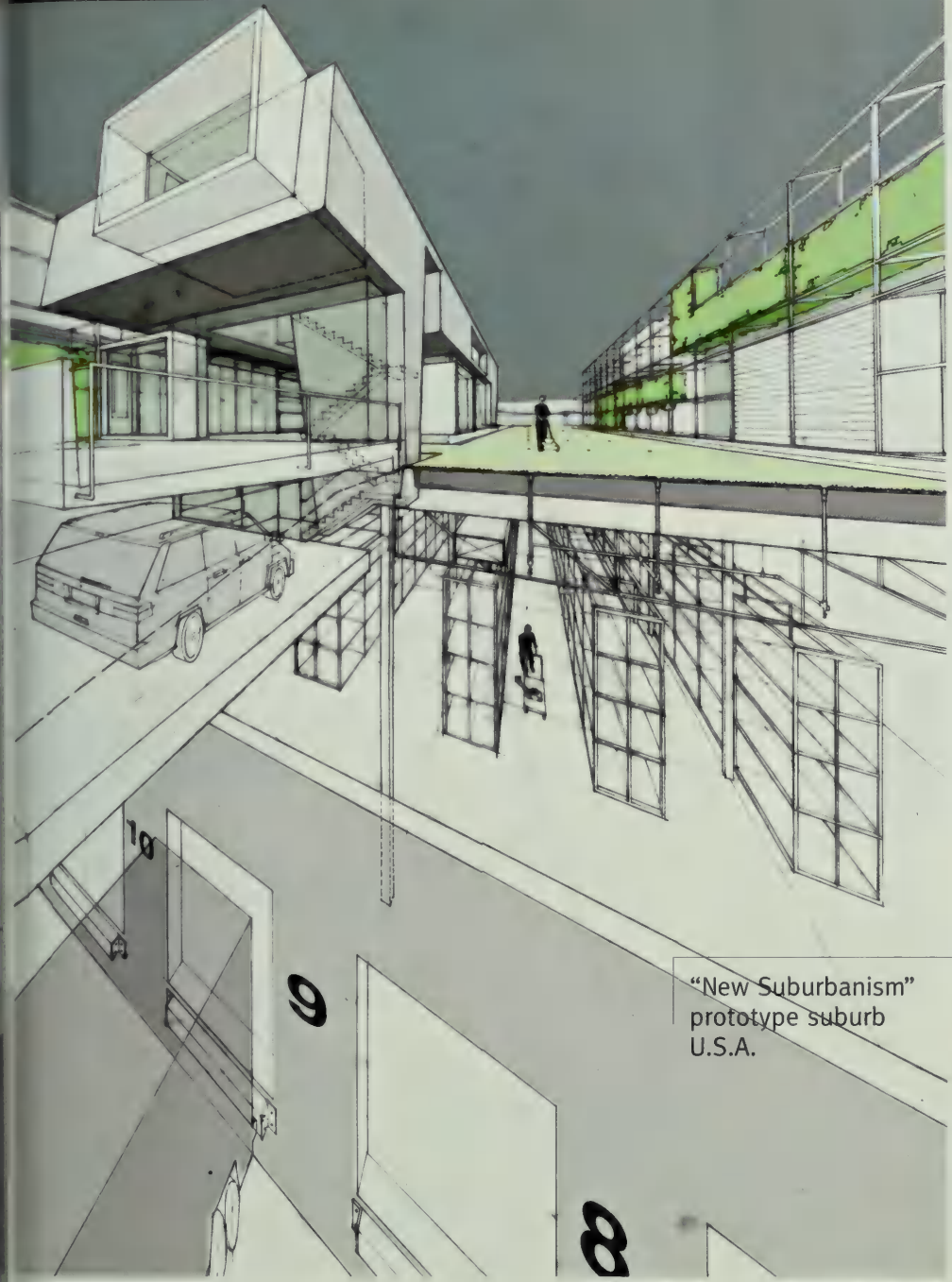
The work of Lewis.Tsurumaki.Lewis is well known to the New York City downtown crowd that frequents Storefront for Art and Architecture, the vanguard gallery where the fledgling firm (in association with Peter Pelsinski) created architectural exhibitions and installations starting in 1994. Since then, the firm has gradually expanded its scope of work. But its commitment to rethinking the nature of the program as well as the design, especially when constrained by tight budget and spaces, began with those early installations that preceded "real" projects.

The three partners, who include identical twins David and Paul Lewis and Mark Tsurumaki, gained recognition with the uptown crowd in 1997 when they presented their work at the "Young Architects Forum"of the venerable Architectural League. Last spring they designed the League's blockbuster *10 Shades of Green* exhibition [MAY 2000, page 198], while their own piece, "Refiled," stole the show at the Triennale of the Cooper-Hewitt National Design Museum. "We are probing architectural conventions by probing representational conventions as well," says Tsurumaki about the inventive multimedia installation.

The first of their four projects in the Triennale installation was a witty proposal for the Seagram Building: "Mies on a Beam (*mise en abyme*)." More than just a play on Mies' architecture and French poststructuralists' favorite literary conceit of a story-within-a-story, the proposal displays the firm's sense of programmatic invention. Using Mies' famous I-beam detail on the Seagram, the three architects designed a mechanized moving platform that could be attached to the short ends of the Seagram Building. It would provide a window-cleaning operation, portable terraces, and outdoor smoking rooms for the offices. "We began with sort of a one-liner," says Paul Lewis, "but it turned out to have more to it than that. We are trying to see what the limits are—not just formally, but in terms of the program. We believe in oscillating between the practical and the speculative, and pushing the rational to the side of the absurd."

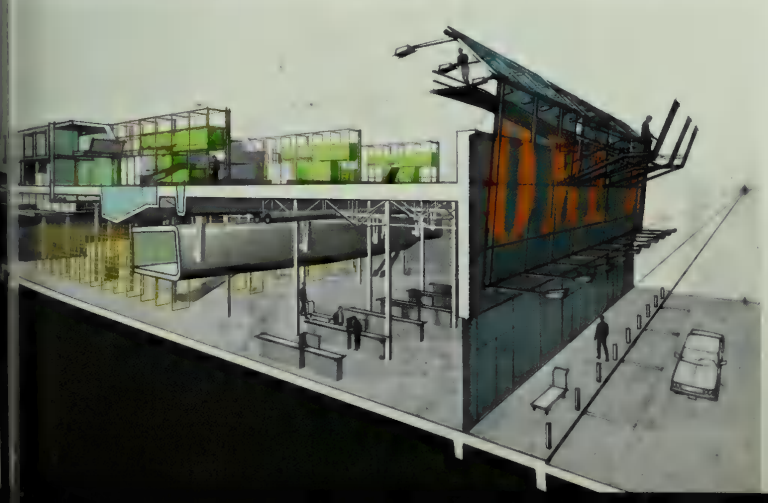
While making its reputation with such exhibitions, the firm has been increasingly called to renovate interiors, such as the offices and a gallery for the Van Alen Institute in New York. It is working on an interior office plan for the Architectural League as well, and completing the Lo Zoo restaurant in Manhattan. "We like to seek out the sense of pleasure and invention possible in the everyday world," says David Lewis. "We look for the latent potential within found conditions, but not necessarily through form. We want to see how you can make the familiar strange." The bar shelving at Lo Zoo, which continues in the basement to become storage, demonstrates the firm's search for unusual "sectional juxtapositions."

Tsurumaki explains that the firm's basic thrust involves "a critical engagement with the normative," so that architecture is not just a practice bound by convention. Paul Lewis agrees but qualifies that assertion: "We are looking at the 'What if?' part of delight. There is some level of pleasure—it isn't just a critical gesture." ■



"New Suburbanism" prototype suburb U.S.A.

Much maligned aspects of "sluburbia," the single-family house and the big-box store are efficiently combined into a two-level steel-frame structure for this speculative project. Houses are built atop the giant roof of the stores, with loop roads and cars linking the two. Roof lawns allow sports, pools double as skylights for store, and residential and commercial components share a heating and air-conditioning infrastructure.





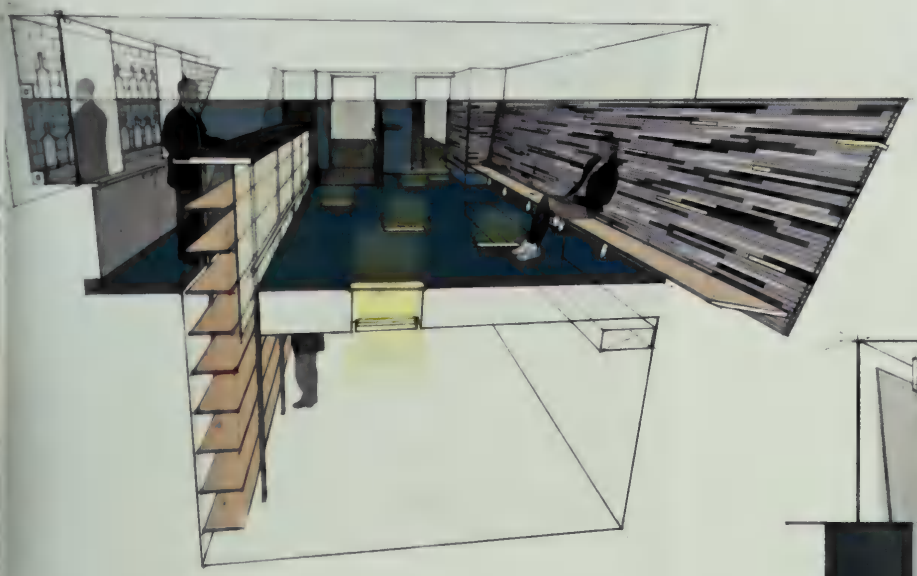


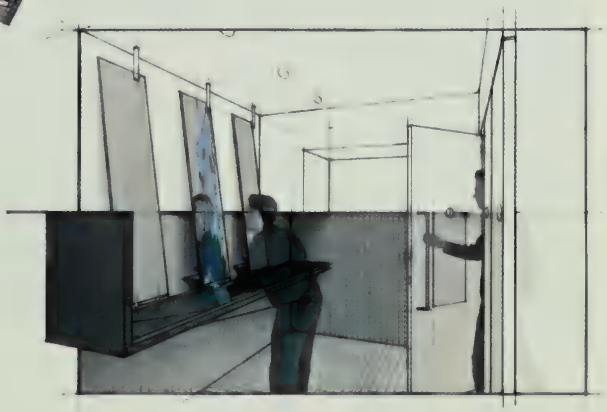
Geltner/Parker loft
Tribeca, New York City

Because of a limited budget of $65,000, Lewis.Tsurumaki.Lewis left half of the loft untouched. Within their "territory of operation," the architects installed a luminous ceiling, a new steel-and-maple stair, a kitchen, and a storage wall. Many of the planes and details meld together, such as the extended stair treads that become part of a cabinet/desk (below).

Lo Zoo restaurant
Houston Street, New York City

In a 160-seat restaurant nearing completion in Manhattan, the architects had to work with ceiling heights of 7 to 10 feet. Slots in the floor of the bar and niches in the walls of the dining space provide ambient lighting. Built-in banquettes are covered with felt strips, and glass shelves are part of a two-level bar-though-basement storage unit. In the rest rooms (below), water for the sink pours down the mirror.





"Refiled," Design Triennial, Cooper-Hewitt Museum

An imaginative mix of representational techniques presents four speculative projects by the firm in four 8-foot-high steel-framed plexiglass vitrines. Drawings, models, TV screens showing animations, and rolodex card holders displaying textual information are installed in the vitrines. Flat steel drawers stood on end roll out between each one to display sectional drawings of the projects in this updated cabinet of curiosities.







Birds Portchmouth Russum adds wit and color to a diverse body of work

By Adam Mornement

Architect: *Birds Portchmouth Russum Architects*
Location: *London*
Date founded: *1989*
Design staff: *5*
Partners: *(above, left to right) Andrew Birds, Michael Russum, Richard Portchmouth, Karl Jensen*
Education: *Birds—Leeds Polytechnic (1981), Polytechnic of Central London (1984); Russum—Kingston Polytechnic (1979, 1982); Portchmouth—Kingston Polytechnic (1978, 1981); Jensen—Rice (1989), Hunter College (1994)*
Work history: *Birds—Foster (1984–85), Stirling Wilford (1985–89), Barnard Urquart Jarvis (1987–88); Russum—Ahrends Burton & Koralek (1982–83), Aldo Rossi, Fabio Reinhardt & Ignazio Gardella (1983), Stirling Wilford (1983–89); Portsmouth—Broadway Malyan (1978–79), Stirling Wilford (1981–89); Jensen—Stirling Wilford (1986–87)*
Key completed projects: *Avenue de Chartres Car Park, Chichester, U.K. (1991); the "Pacemaker" (1994); the Chase apartments, London (1999); Plashet Grove School Footbridge, London (2000)*
Key current projects: *Laganside Cross Harbour Development Area, Belfast; Bethnal Green Live-Work Housing, London; Door furniture for Dorma*
Web site: *www.birdsportch-mouthrussum.com*

Adam Mornement is a former editor of World Architecture.

Andrew Birds, Richard Portchmouth, and Mike Russum started their firm in 1989, after winning a competition to design a car park in the town of Chichester in southern England. At the time, the three 30-something architects (plus Karl Jensen, who contributes from the other side of the Atlantic in New York) were working in the office of the late James Stirling. Did Stirling mind they were moonlighting? "Well I think he had his suspicions," says Portchmouth. "And he did get a bit annoyed on the Monday morning submission deadline. Everyone in the office was helping us out," he adds. "But it's exactly the sort of thing he would have done," the three London-based principals say in unison.

The BPR principals have immense admiration for "Big Jim," and his influence is evident in their work. "Like our mentor, we're not so bothered with taste," says Russum. And like him, BPR has a fondness for repeatedly using eye-catching color in its work; a certain saturated blue shows up in several of its recent projects. BPR, though, is also staking out its own turf with designs that combine attention to detail with a visual playfulness that takes the starch out of architecture.

"I think what makes us different is that, while most architectural design emanates from a brief (program), we take our work back a stage further," says Portchmouth. "In a way, we reinterpret briefs, and there's something more meaningful about the buildings we've come up with as a result," he adds. "The process is quite important," says Birds. "We research from as broad a base as possible and try to reach a solution. The way our thinking works makes the result self-determining."

The Avenue de Chartres Car Park in Chichester is a case in point. The program was to triple the amount of car parking on a piece of land. "To get to the essence of the solution we went back to the original Roman town plan," continues Russum. BPR's design uses one wall of the parking structure to partially reinstate the interrupted Roman town wall, in the process creating an elevated walkway direct to the town center. Five color-coded turrets and the application of vernacular materials complete the pragmatic but creative ensemble.

BPR's most recently completed project, a footbridge linking two schools in east London, is an equally idiosyncratic symbiosis of cost-effective conceptualism. The undulating Teflon-coated structure has iconic qualities that belie a total cost of $825,000.

"The buildings we have done have been successful in terms of meeting time scales and budgets," says Portchmouth. "I think that is an important point to make because if people perceive your work to be adventurous in any way, then [there is an assumption that] it must be expensive or difficult to procure."

To date, BPR's output of completed projects is minimal. From a client's perspective there is a sense that, as with Daniel Libeskind and Rem Koolhaas early in their careers, BPR offers some intriguing ideas but remains a relatively unknown quantity. At the age of 11, BPR is going through that awkward phase—too conceptual to be trusted for big work yet too young to compromise. But it has come close in some high-profile competitions and is ready for clients willing to take a risk. ■

Car park in Chichester







Plashet Grove School Footbridge, London

Connecting the school's original Victorian building and an addition from the 1960s, this footbridge sweeps around trees on the school grounds and crosses a busy road. The bridge has a steel balustrade and deck supported on steel columns. White fabric stretches over a series of steel hoops to protect pedestrians from the elements. Seating and windows at the center of the bridge provide views.









The "Pacemaker"

A manufactured building component that includes mechanical services, bathroom, and vertical circulation, the "Pacemaker" can be added to existing buildings or used as a "starter" kit for new homes. It is delivered to the site by truck and achieves structural stability when segments within the fiberglass shell are filled with concrete.









The Chase
London

This project connects two existing apartments in a Victorian townhouse via a stair inserted into a new bay added to one side of the building. The new bay, which includes the stair, a cloakroom, and a shower, freed up space on the ground floor to create a large living room. The stair's central balustrade is made of a single sheet of sandblasted glass and is supported on stainless-steel rods in the stringers.





SHoP pulls disparate pieces together to create a practice-driven firm with kick

By Clifford A. Pearson

Architect:
SHoP—Sharples Holden Pasquarelli
Location: *New York City*
Design staff: *9*
Date established: *1997*
Partners: *(above, left to right) William Sharples, Coren Sharples, Christopher Sharples, Gregg Pasquarelli, Kimberly Holden*
Education: *W. Sharples—Penn State (1988), Columbia (1994); Coren Sharples—Maryland (1987), Columbia (1994); Chris Sharples—Dickinson College (1987), Columbia (1990); Pasquarelli—Villanova (1987), Columbia (1994); Holden—Vermont (1988), Columbia (1994)*
Work history: *W. Sharples—Clark Construction; Coren Sharples—Viñoly Architects; Chris Sharples—Aoshima Sekkei; Pasquarelli—Frank O. Gehry, Greg Lynn FORM; Holden—Greg Lynn FORM*
Key completed projects: *Costume National store (1997), Teller Residence (1999), Me & Ro store (1999), P.S. 1 "Dunescape" installation (2000); Long View exhibition (2000)*
Key current projects: *Mitchell Park, Greenport, N.Y.; V-Mall, Queens, N.Y.; the New Church of Greater New York, Roslyn Estates, N.Y.; Museum of Sex, New York City; Prentis Hall, Columbia University, New York City; Dakota Jackson factory, Queens, N.Y.; Dakota Jackson showroom, New York City; mixed-use condo development, New York City; 100 Jay Street apartment complex, Brooklyn, N.Y.*
Web site: *www.shoparc.com*

Yes, there's a shop at SHoP/Sharples Holden Pasquarelli and it has nothing to do with acronyms. It occupies about a quarter of the firm's office space, and it is there that the partners and associates cut wood, slice metal, and build old-fashioned, three-dimensional models. For a firm that is best known for its skill with digital technology and yet-to-be-realized projects such as the Museum of Sex in New York City, the sawdust on the floor is a reminder that SHoP is grounded in the built world. "We're inspired by the knowledge that Brunelleschi was a metalsmith when he won the competition to design the dome for Florence's cathedral," says Christopher Sharples. Recent installations at P.S. 1 Contemporary Art Center in Queens [AUGUST 2000, page 59] and the Municipal Arts Society in Manhattan (opposite) show the partners' keen interest in the nuts and bolts of assembling standardized building elements. In these projects, it's not the final form that matters as much as the logic behind the way the pieces come together.

This same kind of flexibility holds true for the firm itself. While all five partners earned graduate architecture degrees from Columbia University, none of them started out in the field. Chris Sharples got his undergraduate degree in fine art; his twin brother, Bill, earned his in architectural engineering; Bill's wife, Coren, studied business management; Holden began in art history; and Holden's husband, Pasquarelli, worked in finance. Their backgrounds and experience in other disciplines have been a strength, says Bill Sharples, helping them understand and communicate with clients and contractors. "Our goal is to be a practice-driven and performance-driven firm," states Coren Sharples. Indeed, the partners' model is more that of a management-consulting firm like McKinsey or Anderson than Richard Meier, says Pasquarelli. "A practice-driven approach allows us to be fluid in our thinking," explains Chris Sharples. How five partners work together is something the firm is still figuring out. "We don't want to have five ateliers working on five sets of projects," says Holden. So far, the partners' roles have changed on each project. "We come together at various points, go off on our own, then come together again later in the process," explains Holden.

The computer has helped SHoP pursue this new model of practice. "The computer affects our work, but it's just a tool," says Bill Sharples. "At this point, though, it is our primary tool," he admits. "The computer lets us look at things faster and more accurately," adds Coren Sharples. "And it lets a firm our size work on some pretty big projects," says Holden. Although the firm's completed projects so far are mostly small-scale or temporary, SHoP has some major buildings on the boards. Next spring, a four-acre waterfront park on Long Island will open with a landscape plan and buildings by SHoP. This will be followed in 2002 by the V-Mall in Queens, an ambitious project encompassing a supermarket, restaurants, commercial condominiums, and parking. Also in the works are a 20-story apartment complex in Brooklyn, a new building for Columbia's School of the Arts, a factory for furniture designer Dakota Jackson, and—when funds are raised—the much-publicized Museum of Sex. For a three-year-old firm, such projects offer a golden opportunity to show what it can do on a bigger scale and larger budget. ■

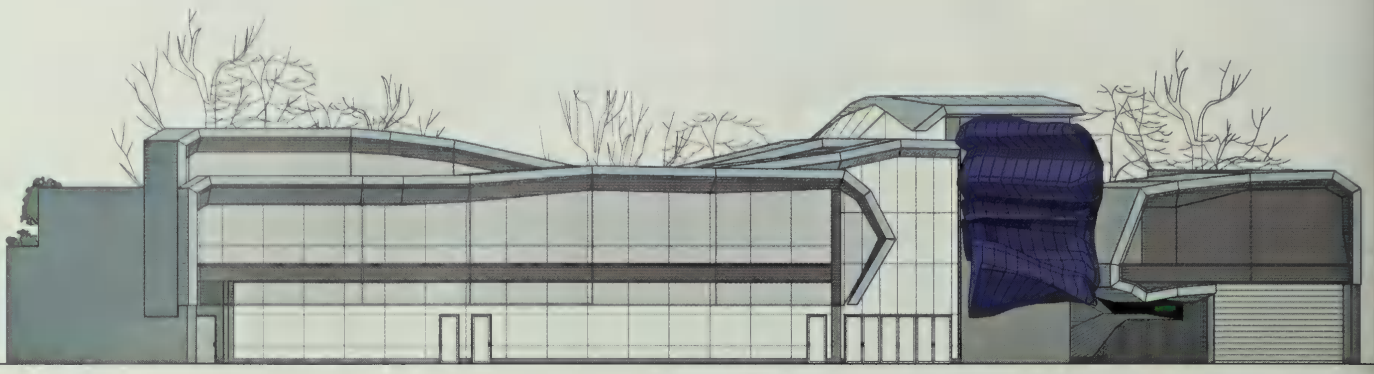
Long View Exhibition
New York City

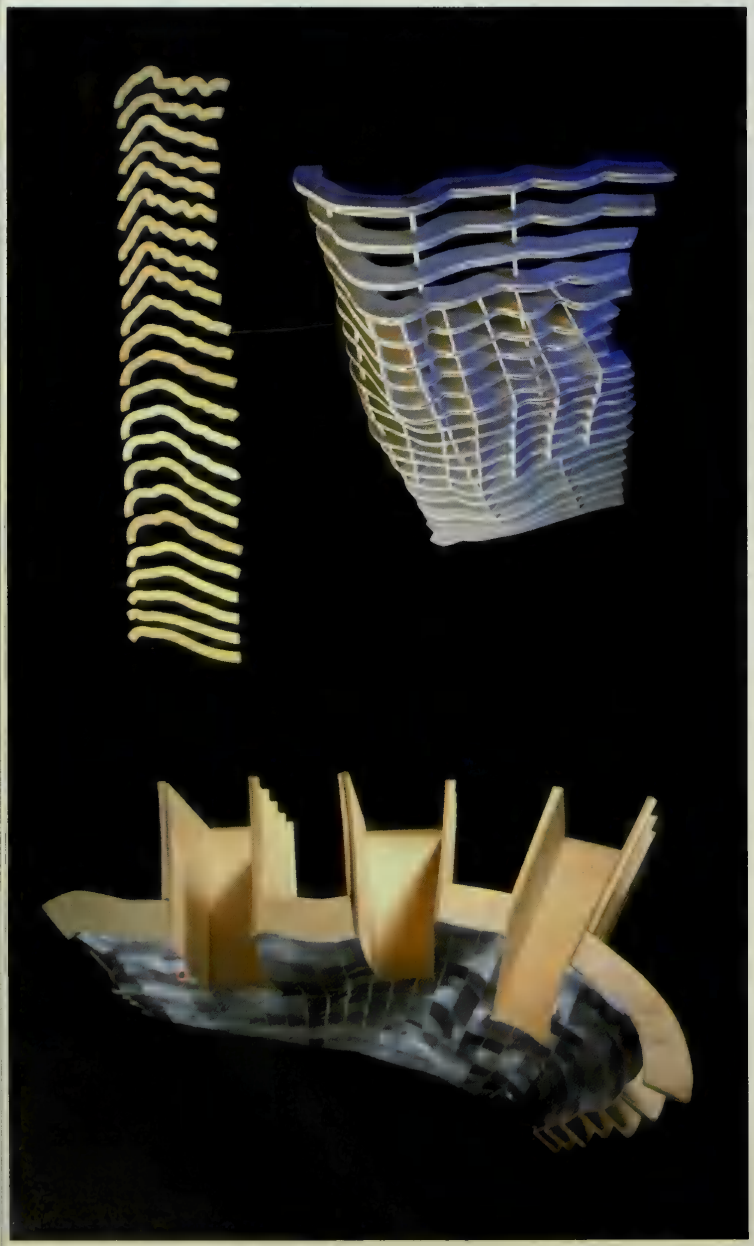
SHoP designed an adjustable armature for a series of two-week exhibitions organized by the Museum of Modern Art, with Philip Johnson as guest curator. The armature is made of 2-by-2-inch aluminum tubes fastened with custom-designed steel hinges and movable struts. The firms featured in the shows were SHoP, UN Studio/Van Berkel & Bos, Michael Maltzan, Reiser + Umemoto, and Foreign Office Architects.

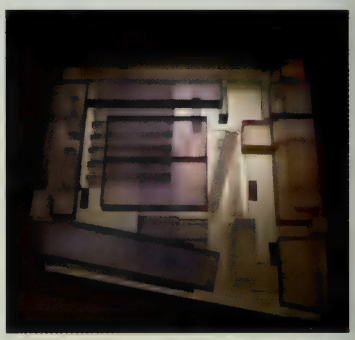




PHOTOGRAPHY: © SHOP (PORTRAIT); JONATHAN HILLYER (THIS PAGE)

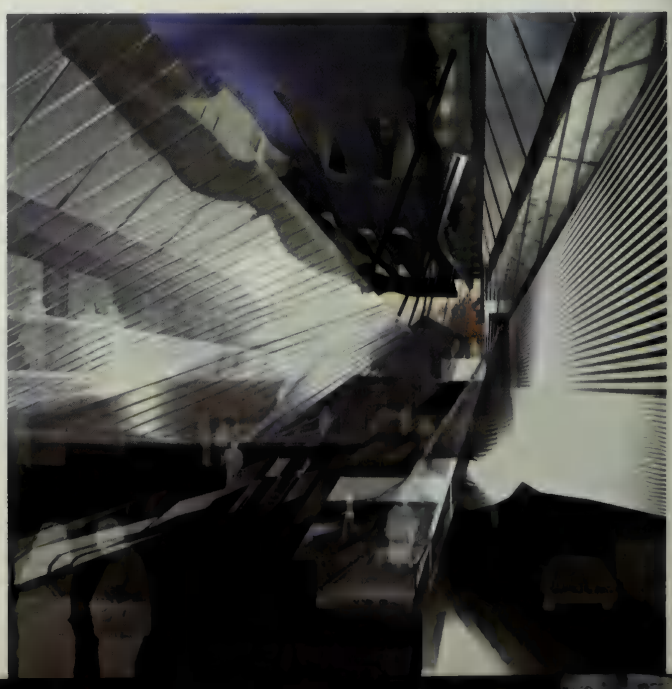






V-Mall
Queens, N.Y.

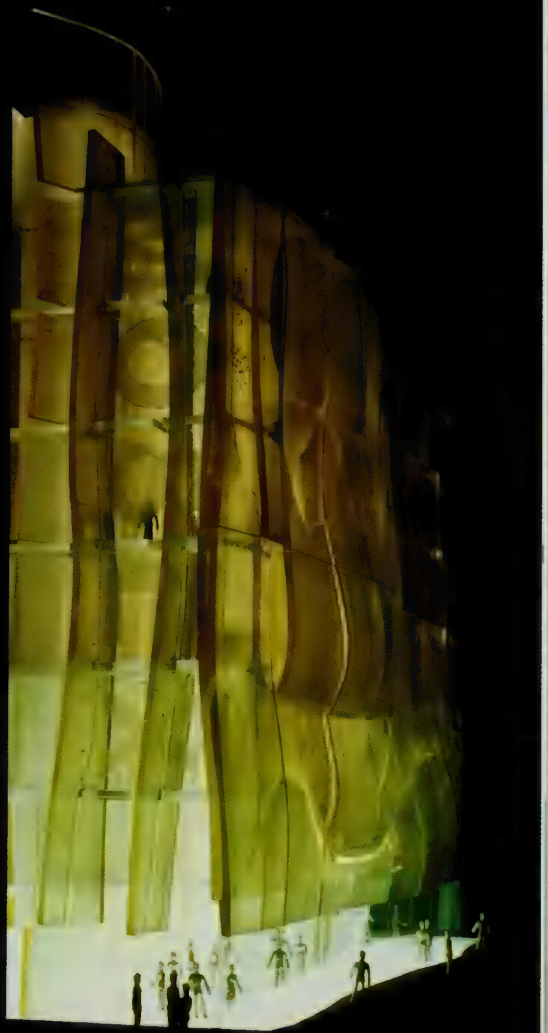
Asked to design a suburban-style strip center on a tight urban site, SHoP stacked the various components vertically with parking for 200 cars; five restaurants; a large supermarket; and 40 commercial condominiums. A vertical passageway slices through the building, creating a dramatic, skylighted gathering and circulation space.



Mitchell Park
Greenport, N.Y.

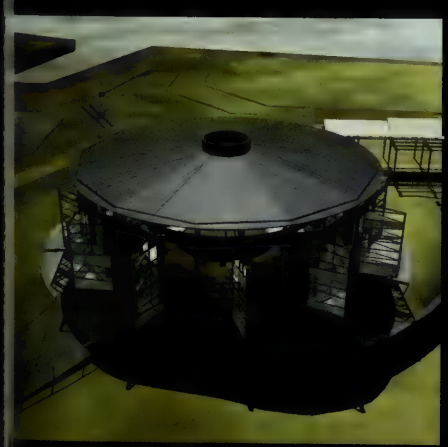
A four-acre waterfront park that will be completed next spring, this project includes both landscaping and architecture. To connect the park to key points in the village, the architects are "bridging" the site with a harborwalk that takes pedestrians past a terraced amphitheater, a commons, a skating rink, and a structure to house a vintage carousel.





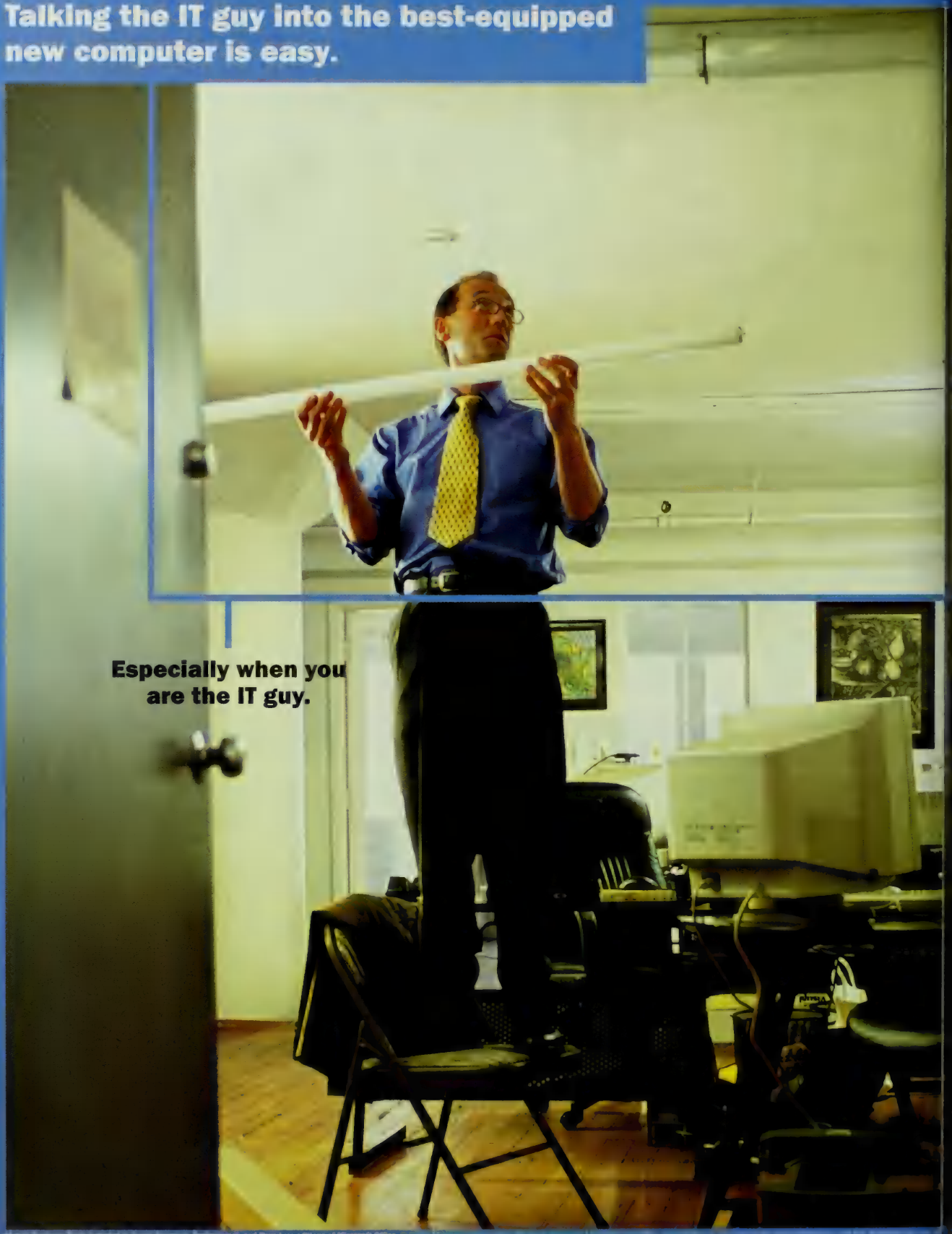
Museum of Sex
New York City

SHoP designed this building as a series of transparent and translucent glass veils that envelop various spaces while offering views or hints of activities inside. An institution examining an essential human behavior, the museum has attracted a lot of attention and is now raising funds for construction.





Talking the IT guy into the best-equipped new computer is easy.



Especially when you are the IT guy.

And the HR guy, and the accounting guy, and...



As the guy running your small business, your IT decisions should make your many jobs easier. That's why choosing new PCs that are preinstalled with Microsoft® Windows® 2000 Professional and Office 2000 is the simple and smart software solution. Running the 2000 generation of software from Microsoft ensures your PCs are powered by the most reliable Windows operating system. And you'll be able to tackle all your tasks with the power of the world's leading productivity suite—complete with tools* specially designed to help smaller companies better manage their finances, serve their customers, and reach new markets. Choose Windows 2000 Professional and Office 2000. It's the easiest executive decision you'll ever make.

To learn more, visit **www.microsoft.com/businessdesktop**

Where do you want to go today?

Microsoft®

TO SEE WHY WE'RE A LEADER IN THE INDUSTRY,

VISIT ONE OF OUR SHOWROOMS.





You won't have to look very far. We're in millions of American homes. That's because everything we do at Owens Corning is designed to help you, whether you're building or remodeling. We have the most innovative solutions in the business, including our unique Lead Matching System which delivers more prospects to you. And we stand behind all of our products with our world-class warranties. To see what else we can do for you, visit **www.owenscorning.com** or call **1-800-GET-PINK.**

OWENS CORNING

CIRCLE 41 ON INQUIRY CARD

THE PINK PANTHER TM & © United Artists Corp. All rights reserved. The color PINK is a registered trademark of Owens Corning.

Where Politics Dwell

TWO ESSAYS OFFER VARIED PERSPECTIVES ON HOUSING POLICY: HOW POLITICS CAN PLAY HAVOC WITH DESIGN and THE NATION'S SKEWED SUBSIDY PRIORITIES



1.

San Jose, Calif.

Pensione Esperanza offers a single-room-occupancy beacon of hope in one of America's least affordable cities.



2.

Hoboken, N.J.

Sergio Guardia retained the identity of industrial structures while transforming them into market-rate loft apartments.



3.

Washington, D.C.

Weinstein Associates derived new housing types from the historic neighborhood in this mixed-income public-housing replacement project.



4.

Portland, Ore.

Sienna Architecture Company assuaged a residential neighborhood's fear of higher-density infill as its Irvington Place enlivened a busy shopping avenue.

By James Russell, AIA

Architects often claim to be victims of the politics of housing. It's their ambivalence toward housing policy that has reduced the influence they could wield, say some advocates. They give architects credit for the benefits that their designs bring: integrating separated populations, for instance, and reducing neighborhood opposition. But housing policy is almost always politically charged, and it has been easy in the past to sacrifice design as a frill in the name of opportunistic "cost effectiveness." Architects also could do more to assuage the often knee-jerk community opposition to affordable housing because they understand the issues that fuel the debates—costs, parking, zoning, density. With housing issues becoming more challenging, architects willing to immerse themselves in policy will have more opportunities to craft solutions.

The good news is that clients and government agencies now widely appreciate the value that design adds. "The old 'do it cheap' way obviously didn't work," says Elinor Bacon, HUD's deputy assistant secretary of public-housing investment. "You want to build in a quality that will make people of all incomes want to live next to people of low income. We're definitely stressing design." This new focus is necessary in part to counteract the well-entrenched image of low-income housing as bleak towers jammed with drug dealers and gangs. The fear can be palpable and unreasoning: "We went to a council meeting in one city the day after we had been hired," says architect Rob Wellington Quigley, "and someone stood up and said how ugly my design was. I had yet to put pencil to paper."

But the means to deal with this fear are now well developed. Quigley's project eventually sailed through the same council, but only after numerous community workshops and a highly participatory design approach. Such outreach is becoming typical. "Good design can lift neighborhoods," says Marilyn Melkonian, president of Telesis, the developer of the Townhomes on Capital hill (page 144). "First, though, you have to recognize that you are building a community, not just a project."

A well-designed project also helps solidify the track record of nonprofit developers, which helps speed approval of subsequent projects. But the design itself must often walk a fine line. Local activists may demand more from affordable projects than from market-rate ones; funders may expect low-income projects to come in below market rate; managers want more costly institutional-quality finishes because they may not have the maintenance resources all-private projects do. "Market-rate developers often don't care about maintenance costs because they figure it will be someone else's problem," says David Baker, designer of the Pensione Esperanza.

Adds Amy Weinstein, architect of the Townhomes on Capitol Hill,

"You spend a lot of time figuring out how to create an affordable level of detail." Having designed a special brick shape, she used it in a number of different ways to get a shadow play and sense of heft in the veneer in the Capitol Hill townhomes project. "We used a lot of vinyl siding," she adds, but sales representatives weren't initially helpful, since so few users apparently seek to disguise the crudeness of many standard details.

Affordable housing is not a market to be entered by the faint of heart. Nor is it particularly lucrative. "It's a living" is about the best architects will say about the fees. Baker puts it succinctly: "If you don't learn to manage these projects efficiently, you'll go broke." Then there are the problem clients. "Some developers are more professional than others and more adept at threading their way through the process," says Quigley. "If we get hooked up with someone who is not adept, we have to solve many more problems within the same fee structure." Quigley sets higher fees for lower building budgets. "The lower the budget, the more time it takes in architectural hours. The better developers understand this and realize it is cheaper to pay more to the architect."

One of the rewards, however, is the opportunity to collaborate with clients on innovative solutions. Some tasks are prosaic: negotiating a legal status for new kinds of single-room-occupancy residences, for example. Occasionally a project offers the opportunity to redefine a housing type. In a new Oakland project, Michael Pyatok has combined low- and middle-income rentals with a co-housing scheme augmented by a children's museum of art, stores, and a farmers' market. "It's as much an economic-development project as a housing project," Pyatok explains.

Common Ground, a nonprofit that creates innovative programs to promote independence and stability for homeless or near-homeless people, had defined a need for housing that fit between the established models of overnight shelters and subsidized long-term housing. New York City architects Marguerite McGoldrick and Gans & Jelacic designed a prototype living pod intended to ease the transition for homeless people who are frightened of shelters or resistant to traditional outreach efforts. The architects invited some potential users to evaluate their prototype. "Ninety-nine percent of the guys who walk in here will say, 'this is home,'" said "Bruce," an alcoholic who makes money running errands for fellow residents of the lower Manhattan flophouse he lives in. "One percent will destroy it just because it's so nice." Another day in the life of America's low-cost housing economy. ■

Housing Subsidies

By James Russell, AIA

While much progress has been made in successfully *designing* housing for those not served by the private market, the government-assisted housing-finance system has long been stretched to the breaking point, a victim of years of public and official neglect.

Now skyrocketing land and house prices have begun driving housing out of financial reach of more people—not just the very poor, but also working people. In some cities, decent housing is no longer affordable for policemen, clerical staff, teachers—even housing-resourceful architects.

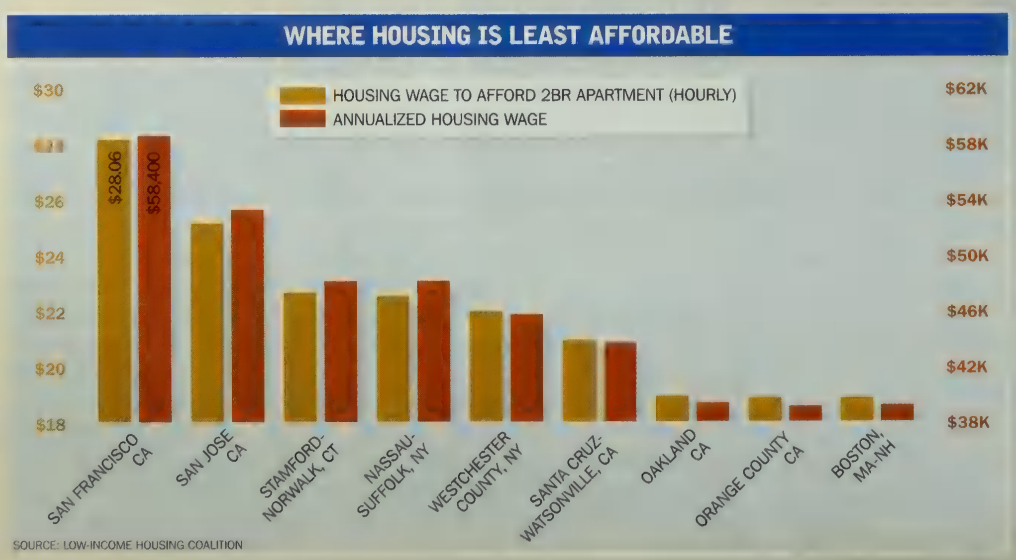
The current system is completely unprepared to handle the developing proportions of the problem. Without a concerted public effort to increase the availability of affordable housing and to help people pay for it, the crisis could become much worse.

While architects rarely take on financing responsibilities in the housing they design, the capricious nature of the system frequently forces architects to revise designs as rules change or delays wreak havoc on already tight construction budgets. Financial and artistic rewards tend to be hard won, so it's a system that attracts architects who want to make a difference in people's lives. "It's incredibly rewarding emotionally," says David Baker, who designed the Pensione Esperanza project (see page 136). "People you've housed tell you that you saved their lives."

An emerging crisis

What crisis? you might ask. After all, for much of the 1990s homeowning actually became accessible to more people, thanks primarily to declining interest rates. Homeownership is at record levels nationally, and more middle- and lower-income people have been able to buy.

Analysis of recent housing-price data by RECORD and extensive interviews with experts point to a number of circumstances that have conjoined recently to reverse this trend in many markets. While interest rates were going down, home prices were rising, outpacing inflation for



THE MOST GENEROUS HOUSING SUBSIDIES FAVOR HOMEOWNERS, BUT RISING PRICES IN MANY CITIES ARE SQUEEZING OUT MIDDLE-CLASS RENTERS . . .

America's misplaced priorities

the last six years. In the last two years, though, interest rates have crept upward without a dampening effect on housing prices. In fast-growing metro areas, they've risen from 18 percent to 27 percent over only four years (with some evidence that in desirable submarkets, prices have gone up from 15 to 20 percent annually).

The widespread nature of price gains means that even formerly lower-cost places such as Seattle, Portland, and Atlanta have significantly closed the gap with such traditionally high-cost locations as San Francisco, New York, Los Angeles, Boston, and Washington. Even inexpensive locations face significant housing challenges. In Las Vegas, faded tourist motels, converted to daily or weekly rentals, are now one of the prime sources of housing for the casino capital's army of service workers. "It's neither safe nor secure and offers no sense of dignity," says Will Newburn, president of the Tomhom Group. That's why the city invited the for-profit developer of single-room residences for low-income workers to build a 319-unit project in the city.

IN SPITE OF RECENT GAINS, A NEW HOUSING-COST CRISIS IS ERUPTING.

According to the Low-Income Housing Coalition, 40 percent or more of renters cannot afford what HUD regards as a fair-market rent in almost half the states and more than half of all metropolitan areas. The coalition annually calculates what it calls the housing wage, the hourly earnings necessary to pay a fair-market rent on a two-bedroom apartment. Nationally it was $12.47 in 1999, more than twice the minimum wage. But it is much higher in the urban areas where there is a reasonable diversity of job opportunities (opposite), and it increased from 10 to 20 percent in more than 100 local jurisdictions in the last year alone.

In the current hot housing market, low-income people see their options vanish. HUD tracks what it calls "worst-case" families—those who earn less than 50 percent of area median income and pay more than 50 percent of their income in rent. The number hit a new record of 5.4 million last year. That's because the supply of private-sector units available to low-wage earners declined by over two million units between 1973 and 1995. Yet, since 1980, government programs for those people who can't afford market-rate housing contracted to a fraction of their former size. There's been a net decline in public-housing units as dilapidated units are torn down. Only a small percentage have been replaced [NOVEMBER 1999, page 76].

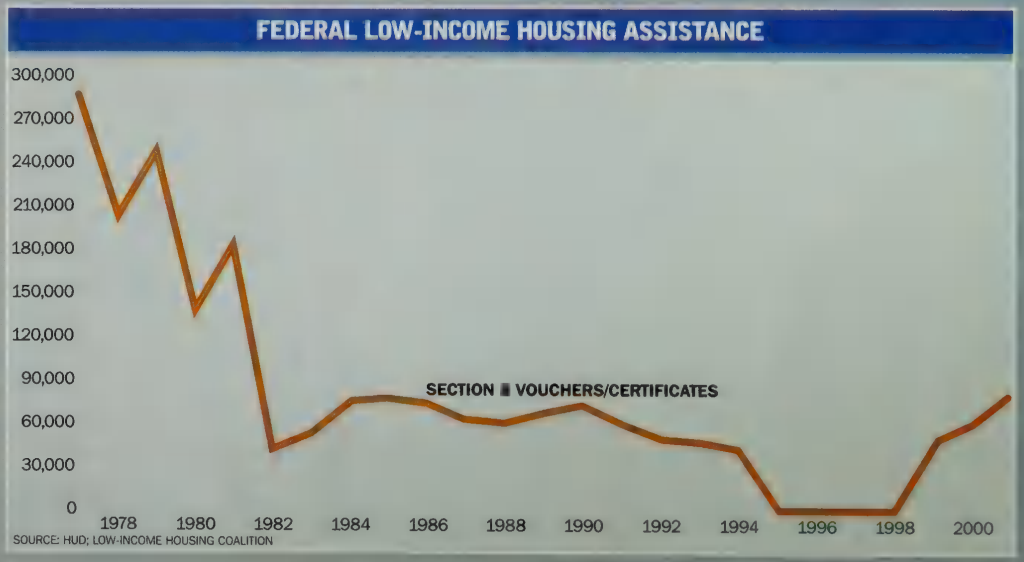
The federal Section 8 program, which is the biggest source of low-income subsidies and is the linchpin for many low-income housing projects, has also shrunk. New Section 8 vouchers and certificates, which help people make up the difference between fair-market rents and what they can afford to pay, disappeared completely from their peak of about 300,000 annually in the 1970s to zero from 1995 to 1999 (see chart below). Because of the abundance of unsubsidized renters, as many as 1 million units may be lost from the Section 8 system over the next few years.

The Low-Income Housing Tax Credit, another financial support of affordable housing production, has also lost value over the years, since Congress capped it in 1986. The number of units produced using tax credits has declined by almost half, just as rising prices have increased the need.

Who is losing out on housing

What happens to people shut out of decent housing? Those with mental disabilities or addiction problems can end up on the street or in shelters, but many more make do by illegally living in garages (renting for $400 a month or more in places), or dividing up basements. They live in their cars or commute to jobs by bus for hours because they can't afford a car. The housing supply is so tight and the desire for decent dwellings so high that people hoping to be selected for the few subsidized units that come on the market will buck enormous odds. According to the Low-Income Housing Coalition, it would not be unusual for a big-city voucher-distribution cycle to attract 25,000 applicants, with 5,000 placed on a waiting list as a result of a lottery, only 1,000 of whom would actually receive a voucher. One New York City project received 29,000 applications for 198 apartments.

. . . JUST AS A LONG DECLINE IN SUBSIDIES HAS CUT THE SUPPLY OF AFFORDABLE HOUSING, ESPECIALLY FOR LOW-WAGE EARNERS.



It's no easier for housing advocates, whose projects must be assembled through the highly competitive panoply of government and private financial sources. At a panel discussion at New York's Van Alen Institute, Roseanne Hagerty, executive director of Common Ground, a nonprofit developer of transitional housing for the homeless, confessed, "We can only get a project done here or there. If you didn't think that was worthwhile, I don't know how you could go on."

Over much of the country, housing prices remain reasonable and have not increased greatly. But one of the most pernicious and hardest-to-quantify aspects of the housing-price crunch is that the largest advances have occurred in those large metropolitan areas that have rapid job growth and offer jobs with real advancement potential.

In these urban areas it is not just jobless welfare recipients who struggle with unmet housing needs. Working people, some with substantial salaries, can't find affordable homes within reasonable commuting distance of their jobs. "Even middle-class, double-income families have few options in our city right now," explains James Lima, of the New York City Department of Housing Preservation and Development. It targets homeownership aid for families with annual incomes as large as $89,000. In California's Silicon Valley, the nation's worst housing case, the $500,000 median home price requires annual earnings of about $110,000. It is not surprising that, according to a report in the *New York Times* last year, teachers, police officers, firefighters, and commissioned salespeople have sought the services of area homeless shelters. In the October issue of *Urban Land*, Anthony Downs, a senior fellow at the Brookings Institution, wrote that California housings costs are contributing "to the generation of large-scale slums."

Skewing subsidies upward

Even as government resources have declined at the lower end of the housing spectrum, Congress and some states have offered steadily more generous subsidies to homeowners, subsidies that have become especially valuable to the affluent. Interest paid on home mortgages has long been deductible, as have property taxes. In recent years, Congress extended interest deductibility to home-equity loans. No other kind of personal debt is treated so kindly by the tax code. Capital gains realized from a sale also are no longer taxable for all but a fraction of owners.

There's something deeply skewed about the nation's housing priorities when it so generously rewards well-heeled owners, while subsidizing only about one-fourth of low-income urban residents eligible for aid. Indeed, because homeowner subsidies come in the form of tax deductions, there's no limit to how much they cost the Treasury. (They've been running at about a $100 billion annual rate, however, roughly four times HUD's entire budget.) No one is denied a deduction because this year's allocation has been used up. While owners can ride the price-inflation wave (they may have to pay more but can sell for more too), people who choose to rent, as well as people who cannot afford to buy, get squeezed. If they aren't chosen for extremely competitive rent subsidies, they get no government housing assistance at all. "The long-term premise of federal housing policy," says Nicholas P. Retsinas, director of the Joint Center for Housing Studies at Harvard University, "was that if you worked you could afford a decent place to live. That was the social contract."

That contract is today a tattered document, but there is a growing realization that the housing crunch is real and that it has substantial destructive potential. Welfare-to-work programs have foundered when clients could not find decent housing, for example.

LOW-INCOME HOUSING SPONSORS MUST RAISE FUNDS FROM AT LEAST HALF A DOZEN PUBLIC AND PRIVATE SOURCES.

Groups as diverse as the Silicon Valley Manufacturers' Association and the area's Commercial Club, in its "Chicago 2020" report, advocate much-expanded affordable housing initiatives. Their member businesses find competitiveness threatened because people who live in less costly locations won't drive two and three hours daily to jobs. Without some means of making housing more affordable for those who earn median income and below, only a sustained economic downturn, driving down the last few years' price gains, is likely to keep the housing crisis from becoming much worse.

Pumping up affordable production

While some states and localities have increased their support for low-income housing (New York City claims to have aided some 65,000 units alone since 1994), none could hope to raise the kind of funds the federal

SUBSIDIES GO TO THE AFFLUENT. . .



Family of four earning $200,000 a year owns a $650,000 home

- Deduct mortgage interest ($41,400)
- Deduct property taxes ($9,000)
- Deduct interest on $40,000 home-equity loan

Total annual federal housing subsidy: $15,072

Value of capital gains taxes avoided when house is sold, assuming it doubles in value: $105,000

Source: *Braverman/Finkelstein Accountants for* RECORD

. . . SQUEEZING RENTERS



government once supplied. Even in its current much-trimmed size, HUD's budget per capita is still much larger than what any state or city dare devote to housing. Only a few years ago, a Republican Congress tried to eliminate HUD. Today, there is a quiet but bipartisan coalition that has modestly boosted low-income housing aid. Congress has just approved 79,000 new Section 8 vouchers for the 2001 fiscal year, up from zero in 1998. It may also boost the value of the low-income housing tax credit.

Rapidly worsening affordability conditions could spur further government action, but it will take more than money to fix what ails the low-income housing production system. Developers and managers recommend a number of strategies that would save the government money and also help architects do a better job:

• *Make it simple.* The complexity of the affordable-housing finance system is so daunting and delays projects to such an extent that only highly sophisticated community organizations and developers dare take it on. Sponsors must generally raise funds from half a dozen public and private sources and a project to take 10 years to complete. A recent project by Oakland-based Michael Pyatok is regarded as highly innovative, but it required a group of 20 funders. The system is also costly. A battery of consultants, attorneys, syndicators, and accountants must become involved, with accumulated fees that can easily exceed architects fees—a scandalous amount to spend on soft costs that in the end benefit neither the project nor its tenants.

As the process goes on, changes by funders or extensive delays can wreak havoc with already tight budgets. After long delays, one of the housing projects by San Diego architect Rob Wellington Quigley ended up with such a tenuous budget that "the subcontractors' choice was either to supply substandard work or walk away from the job."

The complexity of the financing system does have a rationale. It replaces the top-down, bureaucratic urban-renewal methodology of 40 years ago with a process that requires government agencies to form partnerships with developers and reach out to neighbors. It stretches federal dollars by involving more private-sector participants (some of whom are lured by tax breaks). "In this way, we have a lot of people watching the store," explains HUD's Elinor Bacon. But has such partnering gone too far? "You have to combine all the layers into a harmonious financing package, and that takes time and expertise," comments Marilyn Melkonian, president of Telesis, which redeveloped Washington's Ellen Wilson public-housing project. She and other advocates would like to see a one-stop funding process to make it easier for developers. Bacon says HUD prefers the current system.

• *Make it easier to mix.* There is broad consensus in the housing community that even the best-designed building cannot remain viable when impoverished families are concentrated—whether in housing projects or in poor neighborhoods isolated from the economic mainstream. So almost every unit of low-income housing is placed within a development housing people with a range of incomes. Some schemes mix revenue-generating uses, too, offering job-training opportunities while offsetting costs.

But mixing families is not easy. Tenants must be carefully screened. In desirable, well-located neighborhoods, ones that can attract working families at higher incomes, land costs are often prohibitive. Advocates also must often overcome restrictive zoning and community opposition. And funding sources often underwrite one kind of tenant—a homeless person with mental illness, for example—so developers must seek a different source if they also want to house the working poor.

• *Support people and projects.* Some subsidy sources, such as the low-income housing tax credit, support housing construction. Others, like Section 8 vouchers and certificates, help people afford housing. Advocates say too often they can get one or the other, when what they often need is both. There's not yet a methodology that coordinates the two.

• *Consider the cost of homeownership subsidies.* Homeowner tax breaks have been regarded as politically untouchable, but they deserve a more critical look. Such generous subsidies of homeownership actually prime home- and land-price inflation and exacerbate sprawl, creating ever-larger distances between "have" communities, which have a surplus of jobs, and "have not" ones filled with people who need jobs. Even the Congressional Budget Office says the social value of homeownership could be realized at a fraction of the current subsidies' cost to the Treasury. Of course, any substantial decrease creates a dilemma for architects. They directly benefit from the current system, because affluent owners can spend more on their homes. Like everyone else, though, they also suffer from distortions introduced by that system. ■

RECORD *gratefully acknowledges Allen Braverman, of Braverman/Finkelstein Accountants, New York City, who provided information for this article.*

. . . AND OFFERING LIMITED HOPE TO THE POOR.

Single mother with two children earning $36,000 annually who pays $1,200 a month in rent (40% of income, 10% higher than recommended)

- Rent not deductible
- Landlord deducts property tax
- No loan-interest deductible

Total annual federal housing subsidy: $0

Source: *Braverman/Finkelstein Accountants for* RECORD



Single mother with two children holding a Section 8 voucher and earning $16,000 annually in a two-bedroom apartment at HUD fair-market monthly rent of $900

- Tenant pays 30% of income ($370/month)
- HUD voucher pays balance ($530/month)

Total annual federal housing subsidy: $6,360

Source: *Center on Budget Policies and Priorities*

Pensione Esperanza
San Jose, California

1 **DAVID BAKER ASSOCIATES' PENSIONE ESPERANZA IS A SPIRITED YET DIGNIFIED OASIS OF AFFORDABILITY IN SAN JOSE.**

By Lisa Findley

Project: *Pensione Esperanza, San Jose, Calif.*
Architect: *David Baker Associates—David Baker, FAIA, principal; Kevin Wilcock, AIA, project architect; Ted Yoon, Lark Pien, Erica Zitzke (project team)*
Engineers: *Tipping & Mar Associates (structural); Sandis Humber Jones (civil); David Penney Co. (mechanical); HCP Electrical; James Morel (plumbing)*
Consultants: *Cottong & Taniguchi (landscape); Victor Associates (energy)*
Contractor: *Barry Swenson Builders*

Size: *110 rooms, 43,000 square feet*
Cost: *$4.2 million (construction)*

Sources
Curtain wall, entrances: *Vistawall*
Cladding: *Cement plaster stucco, Hardiplank lap siding*
Metal roofing: *BHP*
Windows: *Milgard*
Cabinets and custom woodwork: *Fabricated by architect*
Lighting: *Evergreen Columbia, Lithonia, Halo, DMR, Lightway, Stonco, Hubbell*

WWW *For more information on the people and products involved in this project, go to* ***Projects*** *at* ***www.architecturalrecord.com***

Program

"There are two basic schools of thought when it comes to affordable housing," says David Baker, FAIA. "There is the 'blend-in' school and the 'stick-out' school." Baker, who has completed 24 affordable housing projects, does not adhere to one school or the other. His firm chooses a strategy based on the particular context and goals of each project. The recently completed Pensione Esperanza, for Catholic Charities of San Jose, unquestionably adheres to the "stick-out" school.

Contributing editor Lisa Findley lives in Oakland, Calif., and teaches at the California College of Arts and Crafts.

A 10-minute walk west of the dot-com prosperity of downtown San Jose, near the intersection of two freeways, the Pensione Esperanza optimistically holds the street edge on a strip of gas stations, convenience stores, and car washes. The 110-unit single-room occupancy hotel lives up to its idealistic name, Lodging of Hope, by providing clean, safe, and well-designed accommodations in the midst of one of the least affordable housing markets in the country. Its 273-square-foot rooms are conceptually enlarged by the project's many amenities: furnishings; on-site social services; Internet access; a television and library in the roomy lobby; a community meeting room with a kitchen; bicycle storage; a laundry room, and a huge, sunny, landscaped courtyard complete with fountain. Balanced by a strict "clean and sober" policy, this generosity is intended by Catholic Charities to instill self-respect and pride in its residents.

Funding sources for the $9.4 million project included low-income-housing tax credits and land acquisition and additional funds from the City of San Jose Redevelopment Agency.

"We serve essentially very low income people, at about 30 percent of median income," says Anne Stahr, the asset manager of Catholic Charities. "We have tenants with





No architectural shrinking violet, Pensione Esperanza proclaims its optimistic message through spirited sign-making and a sign's sly reference to the site's past.





With less than 200 feet to allocate for each person, Baker clustered shared amenities around the entrance. Corridors, end-lit by windows (right), offer additional opportunities to relax with neighbors.

mental illness as well as people with other disabilities," she explains. The project also serves some elderly and formerly homeless people who have been diagnosed with AIDS or are recovering from an addiction. The majority, though, have jobs. "They go to work every day, but they earn less than $11 per hour, which is our upper limit." A three-tiered rent system allows tenants to pay as little as $300 a month. The top tier, $500, may seem like a great deal for a single room. But as Stahr points out, "It takes an annual salary of $45,000 to afford a one-bedroom apartment in the area."

Solution

The three-story wood-framed building is organized in a straightforward U shape around a south-facing courtyard. Density is very high, at 118 units per acre, but the units are of course small. Secure, landscaped parking is provided on the back half of the site, alongside a working-class neighborhood dotted with car-repair shops. At a construction cost of $97 per square foot (in a raging construction market), there was little money to dress up the exterior of the project, though Baker made the most of the metal window awnings and carved, colored synthetic stucco.

The lively design of Pensione Esperanza's street corner announces its uplifting intention via commercial means. The sign, a reworked version of one that once heralded a used car lot—the site's former occupant—marks the glassy double-height entry. Playfully tilted walls overhead declare the legitimacy of this descendant of the flophouse.

Inside, David Baker Associates demonstrated what it has learned over years of experience with low-income housing. "We concentrated a lot of our resources on the double-height entry and this great stair to the second floor," Baker says. "That way people love to use the stairs—to see and be seen. We want this to be at least as good as going into the W," a trendy, new San Francisco hotel. Baker's firm enlivened the potentially dreary double-loaded corridors with

windows placed at each end; regularly spaced artificial lighting in brightly painted recesses; and small seating areas with full-height windows that overlook the courtyard.

In the entry and reception area, the architect designed the steel-and-wood staircase and the colored-plywood mailboxes and reception desk. Even the elevator interior gets a special touch in the form of gold- and eggplant-toned plywood.

Commentary

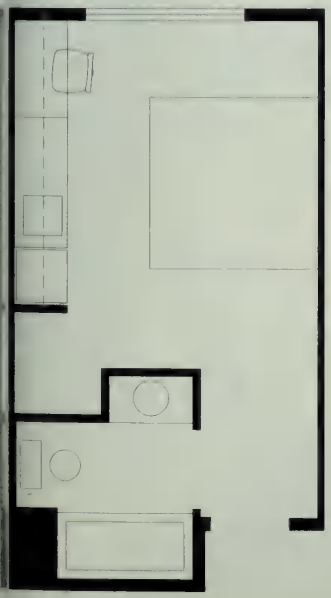
According to Dan Wu, director of housing development for Catholic Charities, residents are comfortable at Pensione Esperanza, and, despite their diversity, develop a sense of community. They know the building is invested with thoughtful and skilled design.

While residents may not be aware of it, the stick-out strategy suggests with lively assurance that buildings should once again hold the street edge, mark the corner, and work at both an urban and pedestrian scale. Catholic Charities is so pleased with the results that it has hired Baker to design two more projects. Pensione Esperanza has also provided the City of San Jose with a building that shows how to reurbanize and revitalize an aging, down-at-the-heels corner of the city. ■









The lobby stair and mailboxes create a social focal point for the project (below). The small size of the rooms (left) limits residents to a microwave oven and hot plate for cooking.

Ballpark
Hoboken, New Jersey

2 **SERGIO GUARDIA BALANCES MATERIALS AND PROPORTIONS TO ASSERT A NEW RESIDENTIAL IDENTITY IN A GRITTY INDUSTRIAL NEIGHBORHOOD.**

By James S. Russell, AIA

Project: *Ballpark, Hoboken, N.J.*
Architect: *Sergio Guardia Architects—Sergio Guardia (principal); Nathaniel Lindsey (project manager); Maarten Van Tuijl, Mathew Snethen (team)*
Owner: *Gotham City Real Estate Services*
Engineer: *Office of Structural Design*
General contractor: *Gotham City Builders*

Size: *64 units, 22,720 square feet (new construction)*
Cost: *$1.98 million*
Completion date: *Summer 2000*

Sources:
Cladding: *Trenwyth Trendstone (ground-face masonry units), TEC (exterior insulation and finish system)*
Windows, skylights, glass sliding doors: *Anderson*
Paints and stains: *Benjamin Moore*
Floor and wall finishes: *Limestone (flooring), Florida tile, Mohawk (carpet)*
Furnishings courtesy of: *Totem, Kartell, Ikea*
Unit lighting: *Ikea*

WWW *For more information on the people and products involved in this project, go to* ***Projects*** *at* ***www.architecturalrecord.com***

Program

In recent years rotting piers collapsing picturesquely into the Hudson river have framed countless photographers' views of the Manhattan skyline from Hoboken, N.J. Today, those views are fast disappearing as office towers rise over the railyards and obliterate the sagging warehouses. The blue-collar towns along the river have rapidly become burgeoning outposts of Manhattan's financial-services industry.

The streets of Hoboken's one-mile-square industrial district are choked with construction paraphernalia as developers convert the old factories into loft-style apartments for young financial-services workers, who either staff the new buildings or commute to Manhattan by car, train, or ferry.

The artists and architects who created the new nationwide mania for lofts did so by making the most of their desirable aspects—the high ceilings, the architectural details, the huge windows—while finessing the difficulties—awkward plans and odd column locations. Though loft-style apartments are the new real-estate industry darling, too many developers' formulaic impulses run aground when they collide with the idiosyncratic nature of buildings erected for other purposes.

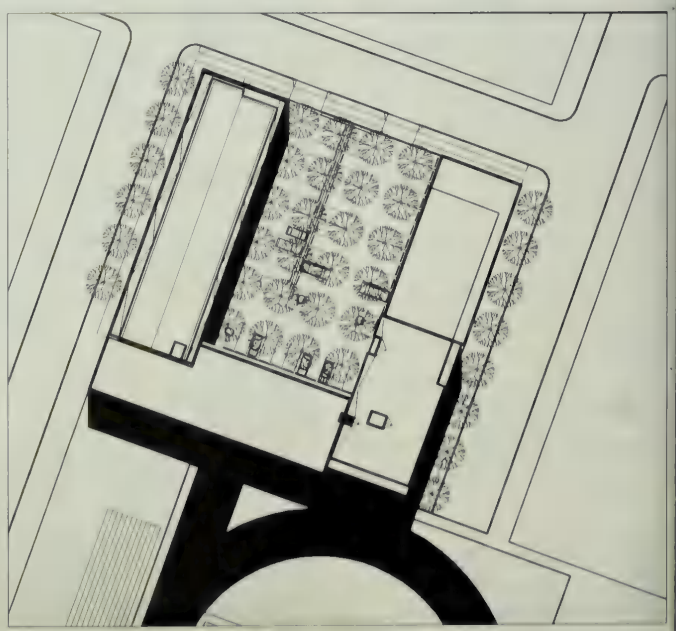
Architect Sergio Guardia left traditional architectural practice to work with builder/developer/manager Gotham City Real Estate Services because he likes teasing well-designed housing out of unpromising raw material.

At the project site, now called Ballpark, two industrial buildings formed an L shape. One, built in the 19th century in a handsome if austere corbeled-brick three-story form, had the high ceilings and high windows that make such buildings desirable for conversion. Guardia had to unite it with a mundane 1940s addition built with strips windows set high above the floor. Other industrial structures in various states of decay and conversion, empty lots, and the athletic field of a high school comprised the surroundings.

Guardia was asked to make 64 market-rate rental units (the zoning maximum) that would appeal to the young, affluent office workers fleeing Manhattan's high rents and congestion.

Solution

Guardia added a new structure, creating with the older buildings a U-shaped courtyard, where the required parking was accommodated. (Below-grade parking was prohibitively expensive because of the area's high water table.) While nearby developers attempted to domesticate the industrial structures with tacked-on dormers or bays, Guardia's more





In Ballpark's built-up industrial context, a playing field offers a welcome sense of openness (below right and bottom). Anchoring a corner and forming a U with existing buildings, Guardia's addition, with beige tones and layered planes, helps to assert the neighborhood's emerging identity.









Carefully proportioned openings (including the lobby, above) and discreetly manipulated planes at the exterior permitted Guardia to achieve a toughness consistent with surroundings while conveying the finer grain of residential use.

abstract and sculptural approach recognized the solidity and austerity of the existing structures.

He departed from both existing buildings in the forms and proportions of the addition, and signaled the new residential use with large areas of wood-frame windows and narrow terraces (some of which do double duty as secondary emergency egress).

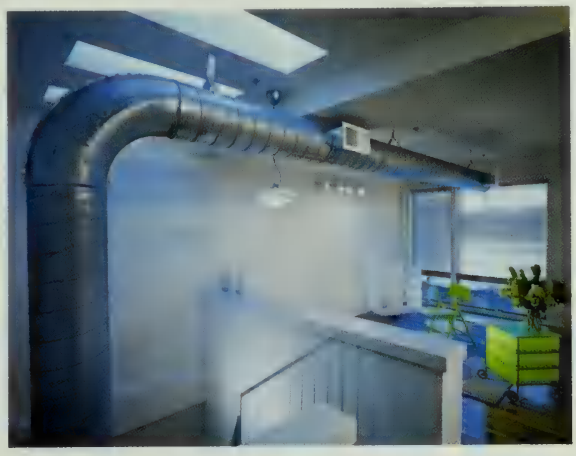
The ground-face block exterior, accented by panels of synthetic stucco, doesn't attempt to blend in with the existing structures either. Instead, the materials and detailing echo the neighborhood's industrial toughness.

With little in the surroundings that is pleasing to look at, Guardia gave many of the units more than one outlook and borrowed light from skylights and double-height stairs (top photos and section, opposite). He generated three-dimensional stacking diagrams on a computer to work out the double-height spaces and duplex units. In close collaboration with Gotham, Guardia met the criteria for cost and construction techniques. Their joint effort paid off. The project, built at less than $90 per square foot, exhibits more than usual construction care. It was fully rented before completion at rates near Manhattan's current stratospheric levels.

Commentary

With its big abstract gestures and evident solidity, Guardia's addition holds its own with the full-depth masonry heft of the surroundings. In a difficult context, Guardia has imbued the structure with an identity that recognizes the neighborhood's industrial past while introducing the more delicate scale appropriate to residential use. The floor plans, which in most residential buildings are either blandly functional or picturesquely idiosyncratic, are unusually well thought through, offering a high degree of amenity even in units with small footprints or a lack of views. Once the overheated housing economy cools, the owner may regret the bare-bones treatment of the courtyard, since many units face only the asphalt lot. ■





Broad window areas, as well as skylights over stairs, draw daylight deep into the structure on the upper-level duplexes. Guardia coordinated the exposed ductwork for sculptural effect.

1. *Parking*
2. *Single-level unit*
3. *Duplex unit*



SECTION

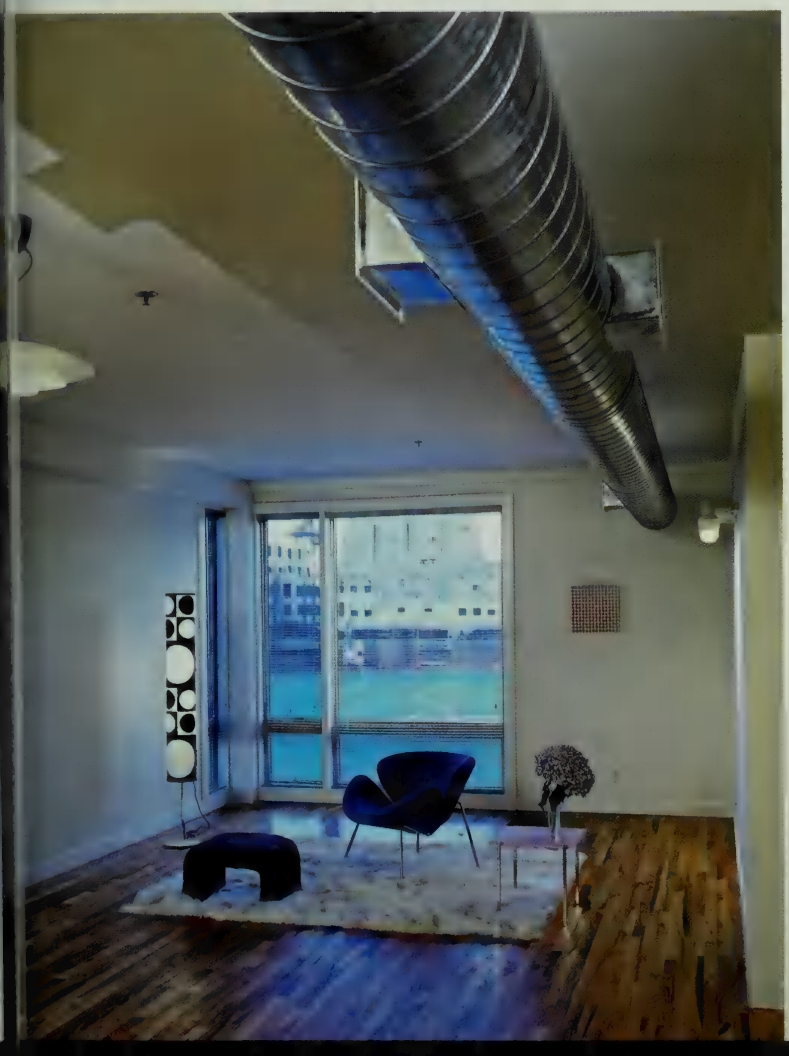
0 10 FT.
3 M.



THIRD FLOOR



FIRST AND SECOND FLOOR



The Townhomes on Capitol Hill Washington, D.C.

3 **WEINSTEIN ASSOCIATES REPLACED ABANDONED PUBLIC HOUSING WITH A MIXED-INCOME DEVELOPMENT THAT KNITS A NEIGHBORHOOD TOGETHER.**

By James S. Russell, AIA

Project: *The Townhomes on Capitol Hill, Washington, D.C.*
Architect: *Weinstein Associates—Amy Weinstein, FAIA, principal; Margaret Mook, AIA, Kathleen Lofdahl, senior project architect; Robert Karow, AIA, team*
Owner: *The Ellen Wilson Community Development Corporation, District of Columbia Housing Authority*
Developer: *Telesis*
Engineers: *Ehlert/Bryan (structural); Bansal and Associates (mechanical, electrical, plumbing); A. Morton Thomas and Associates (civil)*
Consultants: *Oehme, van Sweden and Associates (landscape)*

Size: *134 cooperative units with 13 additional townhouses to be completed*
Income mix: *One-fourth of residents earn less than 25 percent of area median income; one-fourth earn between 25 and 50 percent of median; half earn between 50 percent and 80 percent of median, with 20 units set aside for higher incomes*

Sources
Masonry: *Belden, Glen-Gery, Interstate, Darlington, Pine Hall, Richtex, Palmetto, General Shale (brick); Arriscraft (masonry units); Russell Cast Stone*
Siding: *Wolverine (vinyl); Berridge (metal shingles); Buckingham Slate (slate shingles); GAF (fiberglass)*

WWW *For more information on the people and products involved in this project, go to* **Projects** *at* **www.architecturalrecord.com**

Program

The proper-looking facades along I Street in southeastern Washington, D. C., may look as though they have long upheld the demeanor of this gentrifying neighborhood. They are, however, new, replacing a dispiriting sight all too often encountered in the nation's large older cities: graffiti-spattered, trash-strewn, blocked-up, abandoned buildings.

A neighborhood group asked architect Amy Weinstein, FAIA, to prepare some sketches (pro bono) to convince the District of Columbia to redevelop the site of what had once been the Ellen Wilson Homes, a public-housing project.

That was in 1989. Little did Weinstein know that her ideas would take 10 years and three city administrations to bear fruit as the Townhomes on Capitol Hill. The project was the first to be funded by HUD under the Hope VI program, the purpose of which is to redevelop severely distressed public-housing projects. Once it had won funding in 1993, however, it took six more years to put the financing in place, to survive the local housing authority's slide into receivership, to win approval from neighborhood groups and the local historic-preservation board, and to construct the buildings.

The parties involved negotiated a unique financial basis for the project as a mixed-income cooperative in which residents buy shares. This allows all the residents, regardless of income level, to build equity as the project appreciates. Since a HUD grant covered the $25 million cost of demolition and new construction, the low-income residents will not require any further government subsidy. The total revenue of shareholder payments covers the operating costs.

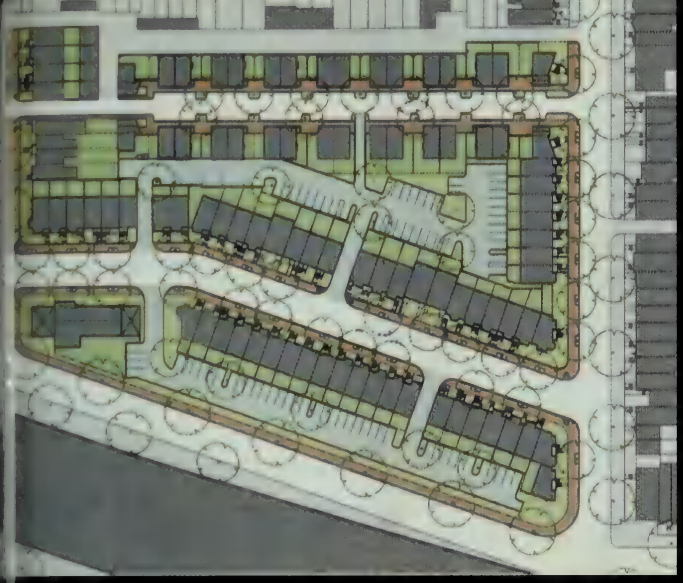
Solution

Design for the project began in earnest in 1995 after Weinstein won a competition for the project with Telesis, a long-time developer of projects in distressed neighborhoods. "We stayed with one idea throughout, which was that all the existing buildings would be torn down and we would restore the character of the historic district that surrounds the site in the new construction," says Weinstein.

She took her design cues from the surrounding neighborhood, which, though dominated by late-19th-century townhouses, had grown over a long period and included a wide mixture of housing, commercial uses, races, and incomes. A townhouse with a ground-floor apartment under a raised two-level unit (see plan, page 139) became the site plan's standard unit, to which Weinstein added variations to address specific circumstances. On the north side of the site she placed two-family houses facing a new mews, redefining a frayed but existing alley. The central part of the site wraps parking with townhouses,



Two-family houses face a new mews on the north side (right), redefining an existing alley (site plan above).



The central part of the site wraps parking with townhouses, interwoven with small apartments, two-family houses and single-family houses, all derived from types found in the neighborhood (below).

Weinstein cut a new street near the southern end of the site (middle and below left) so that the row of houses nearest the freeway would face an intimate street rather than the roar of traffic.

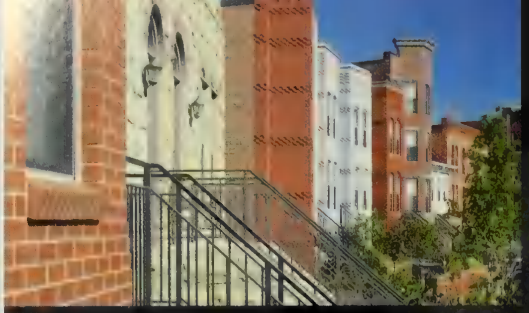




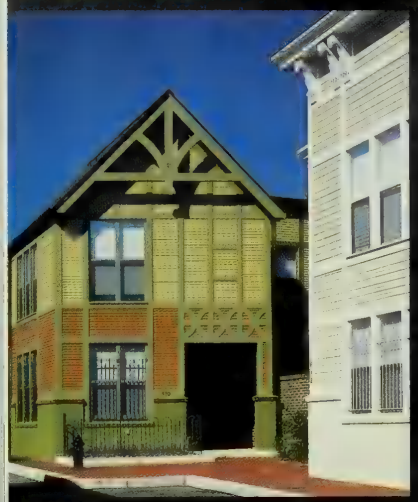










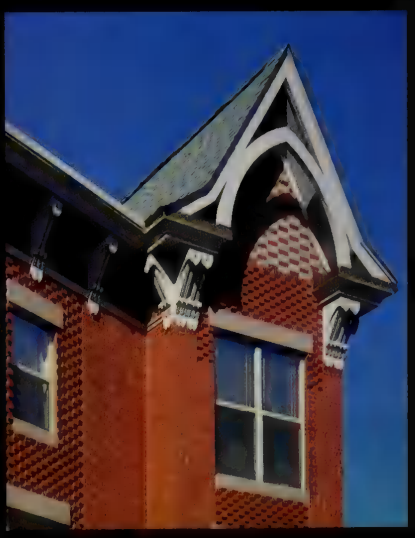


Special brackets were designed for the smaller-scaled mews street (left, right, and below). Victorian houses (bottom) form a gateway to the mews. Vinyl siding is set amidst wood trim; cast stone augments brick, and special cast blocks add additional texture throughout the blocks (above). Roofs mix slate and fiberglass shingles.









interwoven with small apartments, two-family houses, and single-family houses, all derived from types found in the neighborhood. Weinstein cut a new street toward the southern end of the site, so that the southernmost row of houses would face an intimate street rather than the roar of the adjacent freeway.

"We paid a lot of attention to developing a kind of Victorian character, which on Capitol Hill means vertical, attenuated proportions and a picturesque silhouette where the buildings meet the sky," explains Weinstein. The street frontages have been faced mostly in brick over the wood-frame construction. Synthetic stucco and wood siding appear predominantly on the mews units. The facades away from the street are clad in vinyl siding for economy. "It's very much a kind of Mary Jane on the street and plain Jane in the rear, which is common on Capitol Hill," she adds.

According to Marilyn Melkonian, the president of Telesis, "The federal side wanted good design and put tremendous emphasis on it. They say they're working with New Urbanist principles, but they are simply good neighborhood design principles."

Commentary

Telesis says the hard costs were $70 per square foot. The project looks as if it cost far more, owing to the efforts of architect and developer, who carefully allocated the budget for greatest impact. The sacrifices came in the backs of the structures, which are severe-looking, and in the interiors, which are modestly finished regardless of the income level of the occupant.

Too often, the historicist approach to design results in aesthetically dumbed-down tradition. Weinstein's approach went much deeper than facade reproduction. She built in enormous variety and functionality by carefully manipulating traditional floor plans and by using a varied but inexpensive array of materials and details. Market-rate housing is rarely built to the quality standard achieved in this redevelopment, which won an AIA award last year. ■



SECOND FLOOR, UPPER UNIT

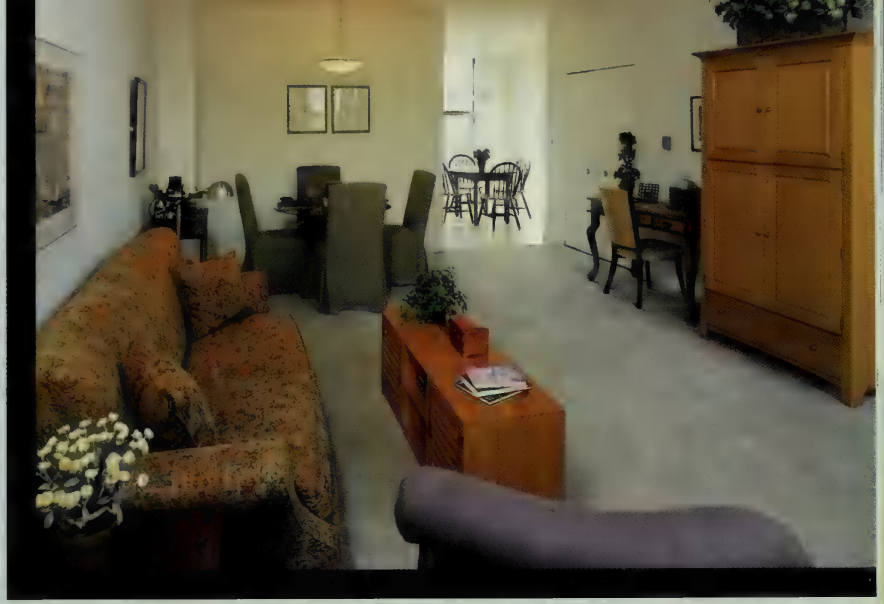


IRST FLOOR, UPPER UNIT



IRST FLOOR, LOWER UNIT

1. *Living*
2. *Dining*
3. *Living/dining*
4. *Bedroom*



Weinstein studied plans of historic house types in the neighborhood, then reworked them. The plans were simple, making them easy to build, yet they accommodate contemporary, flexible living styles.



SECOND FLOOR, UPPER UNIT



FIRST FLOOR, UPPER UNIT



ENGLISH BASEMENT APARTMENT

Irvington Place
Portland, Oregon

4 **SIENNA ARCHITECTURE COMPANY ADDS CONDOMINIUMS TO A BUSY RETAIL STRIP WHILE ADDRESSING A NEIGHBORHOOD'S FEAR OF GREATER DENSITY.**

By Sheri Olson, AIA

Project: *Irvington Place, Portland, Ore.*
Architect: *Sienna Architecture Company—Gary Reddick, principal-in-charge; Robin Chard, AIA, principal; Susan Wordeman, Bill Ruecker, project managers; Jeff Lamb, Matt Janssen, design team*
Client: *Irvington Place LLC*
Engineers: *KPFF Consulting Engineers (structural); Kurahashi & Associates (civil); Geo Engineers (soil)*
General contractor: *Mega Pacific*
Consultants: *Beighley & Associates (landscape); Marx Associates (survey)*

Size: *57 market-rate units, 16,100 square feet of retail, and 25 parking spaces—108,000 square feet total*

Sources
Windows: *Alpine/Milgard*
Light soffits: *Kalwall*
Interior lighting: *North Coast Electric*
Wood doors: *Valley Mill*
Metal doors: *Benson*
Floor and wall tile: *Dal-Tile*
Carpet: *Harbinger*
Elevators: *U.S. Elevator*

WWW *For more information on the people and products involved in this project, go to* ***Projects*** *at* ***www.architecturalrecord.com***

Program

When developer Barry Menashe hired Sienna Architecture Company to design a single-story of retail space backed by surface parking along one of the busiest arterials in Portland, Ore., CEO Gary Reddick, AIA, saw a lost opportunity. Reddick crusades against underusing property in this city squeezed by a strict urban-growth boundary. The 200-foot-square block was zoned for a development denser than a strip of stores. "Every time Barry came into the office I bugged him about putting housing on top of the retail," says Reddick.

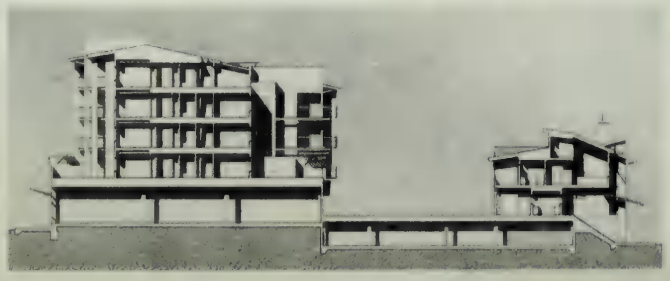
Menashe was reluctant. He had already developed two profitable retail projects on the same street but had no track record with housing. But Reddick persisted, offering to do conceptual design on spec to determine unit counts and costs. The resulting pro forma—57 market-rate units, 16,100 square feet of retail, and 25 parking spaces—convinced the developer to move forward with a mixed-use project.

The next hurdle was calming the fears of residents of the historic Irvington district that borders the north edge of the site. "There's an unfortunate perception that inner-city neighborhoods are going to suffer from inappropriate infill growth," says Reddick. But Portland's anti-sprawl regime intends to focus higher-density development on such major transportation corridors as Irvington's Broadway, which is well served by public transportation. Sienna worked closely with community planning authorities early in the design process, winning local support as well as a 1998 Governor's Livability Award.

Solution

"We saw this project as a prototype for increasing density without sacrificing the character of the neighborhood," says Reddick. The design plugs a hole in the retail district with a five-story retail/con-

Seattle-based contributing editor Sheri Olson is author of a forthcoming monograph on the Miller/Hull Partnership.







Along Broadway, brick cladding on the storefronts gives way to maize-tinted stucco at the upper residential levels. The walls are relieved by recesses and metal-paneled balconies.









A variety of materials, proportions, and details bridge the gulf in scale and style between the project's commercial edges (left in photo above) and its residential ones (middle right). Canopies mark entrances to the parking-court (left). The vertical proportions of townhouses (top right) fit the scale of the side street.

dominium block along Broadway and transitions to the smaller-scale residential streets with a row of two-story townhouses. The angle of an overriding sloped roof on the condominium continues over the townhouses, visually tying the masses together.

As built, the 108,000-square-foot project is standard 4-over-1 construction with a single story of poured-in-place concrete at the retail and parking level, creating a plinth for the wood-framed housing above. The site's slope allows parking to slip under the townhouses. In addition, the architects provided more parking up a short ramp in a raised open-air courtyard at the center of the block.

Each townhouse has a private entrance off both the street and the courtyard. A double-height living room makes the compact two-bedroom units appear larger than their 1,200 square feet. A mezzanine above the master bedroom opens onto the living room, which owners can finish as additional storage space or as a small office.

The double-loaded condominiums, a mix of one- and two-bedroom units ranging from 860 to 1,200 square feet, appeal to single urban professionals, couples without children, and seniors. "The diversity of the residents is an example of how deep the market is for people who want to live in the city," says Reddick. Interiors are finished with conventional materials, but each unit has nine-foot ceilings, generous exterior balconies, and views of downtown or snow-capped Mount St. Helens.

Commentary

Along this busy street, the design relies on a plethora of railings, trellises, and floating beams to create shadow lines and detail, a dizzying effort to relieve what might otherwise be thought an overweening mass. The restraint of the townhouses is more successful than the metal-festooned condominium block. Overarticulation aside, the project's density adds vitality to the street, creating a lively 24-hour destination in place of what might have been an asphalt parking lot. ■



"No photo eyes means no callbacks. I'm making it automatic in my homes."

Jim Ayers, Builder
Hendersonville, NC



"Safe, quiet, real cutting edge. Wayne-Dalton sure has the handle on innovation."

Bill Davis, Builder
Fort Walton Beach, FL

Our new DoorMaster™ garage door opener is the talk of the industry.

(You have their word on it.)

The DoorMaster garage door opener has it all: wireless technology to reduce builders' construction time and costs; no photo eye requirements, so misalignment callbacks are eliminated; quiet operation; and customized light location.

Plus, it has no unsightly rails or ceiling-mounted power unit, no exposed springs, no door operating arm; it's highly sensitive to obstructions; and features exclusive, built-in safety features. The DoorMaster opener, when combined with a WayneGard pinch resistant door, makes the first ever UL Listed door and opener system.

It's revolutionary, and you can quote *us* on that.



FreeVideo

To receive a free short video on the new DoorMaster opener, log on to www.wayne-dalton.com/video Or call 888-215-2225.



Wayne® Dalton

You want a Wayne-Dalton door system.™ (Just to be safe.)

e-Dalton Corp., Mt. Hope, OH 44660 © 2000, Wayne-Dalton Corp.

CIRCLE 42 ON INQUIRY CARD

NOW, A DESIGN FREEDOM THAT PRECAST CAN'T OFFER





New. Formawall® Dimension Series® architectural metal panels.

Wide color selection that makes precast look drab. Why settle for gray when you can have all the colors of the rainbow? Tough, weathertight CENTRIA Dimension Series panels are available in our Colorstorm™ palette of more than 100 standard colors. With Dimension Series panels, you can choose virtually any color you want for your designs — from conservative, subdued earthtones to bright, vibrant, grab-you-by-the lapel hues that demand attention. The panels are attractive and weathertight, and they come in varying thicknesses, profiles and reveals, offering you exceptional design freedom. And we offer a number of finish options to match your budget as well as your application. Don't cast your plans in concrete, start adding a new Dimension to your design. Contact CENTRIA today for a colorful personal presentation. **Quit stonewalling. You've settled for precast long enough.**

CENTRIA

CENTRIA Architectural Systems

DIMENSION SERIES A Product For The New Millennium

1 . 8 0 0 . 7 5 2 . 0 5 4 9

www.centria.com

CIRCLE 43 ON INQUIRY CARD

Maintaining security in an insecure world

NEW STRATEGIES ARE EMERGING TO HELP ARCHITECTS DESIGN WITHOUT A BUNKER MENTALITY

By Randy Nason, P.E.

The destruction of the Alfred P. Murrah Building in Oklahoma City on April 19, 1995, killed 168 people and inaugurated a new era in public and private building security in the United States. This terrorist attack prompted the Department of Justice to issue a report ("Vulnerability Assessment of Federal Facilities," U.S. Department of Justice, United States Marshals Service, June 28, 1995) establishing definitive minimum standards for public buildings across the United States. The Murrah Building bombing also fostered discussion between the public and private sectors, leading to a heightened understanding of security issues. That has had an enormous impact on the design of structures perceived to be vulnerable to attack. These conclusions, long held by security practitioners, were for the first time squarely faced by those outside the security mainstream and are threefold:

First of all, there is a threat in every sector. For U.S. government facilities such as embassies and military installations, this threat is well-defined and demonstrated. However, for private industry, the threat is less quantified and is generally defined in terms of the security program.

Second, there is no truly secure building. As new buildings are designed and constructed to resist terrorist attacks, the resources and resourcefulness of adversaries increase as well. This prompts yet another round of escalating countermeasures in the built environment.

Finally, there are tools available. In spite of the fact that terrorists can usually trump the best efforts of the design community, the resistance of public and private buildings to malevolent actions can be increased. In this context, managing risk often means that building owners must find ways to become a harder target than others in their category, while simultaneously providing a creative and efficient workplace. The theory of crime displacement says that an increase in security at a specific facility will divert the adversary to equally attractive but less resistant targets. Being the toughest on the block, therefore, takes on a new meaning.

CPTED strategies

Crime Prevention Through Environmental Design (CPTED) is a design model that has received broad attention recently, even though the principles have been around for more than 40 years. Drawing heavily on behavioral science rather than target-hardening strategies, CPTED's fundamental premise is that the physical environment can be altered or managed to produce responses that reduce the incidence of crime. The four key elements are territoriality, natural surveillance, activity support, and access control. A simple example of the CPTED model involves enhanced lighting, which contributes to natural surveillance. CPTED has found wide application in the design of environments



Security cameras monitor activity in hallways and all public areas of Chesterton High School and feed images to a central security office.

Randy Nason is a corporate vice president and manager of the Security Consulting Group at C. H. Guernsey and Company in Oklahoma City.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 157 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Describe how environmental design can prevent crime.*
2. *Explain the theory of crime displacement.*
3. *Discuss the security issues of buildings in the public and private sector.*

WWW *For this and more continuing education go to:* **www.architecturalrecord.com**





CASE STUDY

Oklahoma City gets a new federal building

The General Services Administration's (GSA) new federal campus in Oklahoma City will be one block north and west of the former Alfred P. Murrah Federal Building, which was destroyed by a car bomb blast on April 19, 1995.

Understandably, the client ranked security its top priority. The new $40 million, 185,000-square-foot facility, designed by the Chicago firm Ross Barney + Jankowski (RB+J) will be equipped with the latest security devices, but it won't be an impenetrable fortress.

The new plan originally called for three four-story buildings on a three-block site, based on the premise that employees would feel more secure in multiple low-rise buildings rather than one high-rise. Because the GSA was unable to purchase all three blocks, RB+J designed the scheme to fit on two.

With regard to protecting against bomb blasts, GSA guidelines encourage buildings to be set back 100 feet from the street. With the smaller site, however, the setback was limited to 50 feet. Carol Ross Barney, principal at RB+J, acknowledges that "distance from vehicular traffic is the easiest defense, but easiest isn't always the best." RB+J's solution employs a "hard" architectural concrete side to the public, which encloses a curtain-wall "soft" side, wrapping around a garden courtyard. This U-shaped footprint will give employees a sense of security while allowing unobstructed surveillance of the open space.

GSA guidelines require that vehicular drop-off lanes be no closer than 20 feet from the building and that there be physical obstructions to maintain this distance. The architects sought alternatives to the bollard solution seen so often around public buildings. They considered installing grates that collapse under the weight of a car

involving multiple facilities such as campuses, communities, and public-housing complexes.

Keeping a distance

The effectiveness of CPTED is limited to those situations where the adversary can be deterred by the soft measures generally employed within CPTED guidelines. In cases where the threat involves terrorist groups bent on massive destruction and loss of life, more aggressive measures are required. For these high-level threats, facility and campus design plays a key role in how efficiently active security measures can be applied. For example, postulated high-level threats generally involve explosive devices.

THE DEFINITION OF SAFE DISTANCE IS DETERMINED BY THE PERCEIVED THREAT AND FACILITY CONSTRUCTION.

The only effective tool available to counter this threat is distance. Borrowing principles from earthquake-resistant facility design is expected to increase the ability of a building to survive a blast. Building failure is a clear contributor to blast-related injuries and fatalities. The major contributors, however, are the direct overpressure effects and glass. Much progress has been made in devising glazing that will withstand higher overpressure before failure. Unfortunately, the overpressures that can be withstood by current materials are orders of magnitude below that experienced in the proximity of an explosive device. For facility planners and designers, the solution to the explosive threat remains distance. Campuses with greenbelts provide the opportunity to keep potential explosive devices a safe distance from the main facilities. The definition of safe distance is entirely determined by the perceived threat and facility construction. Many locations, most notably urban environments, simply do not have the space required to achieve an acceptable setback.

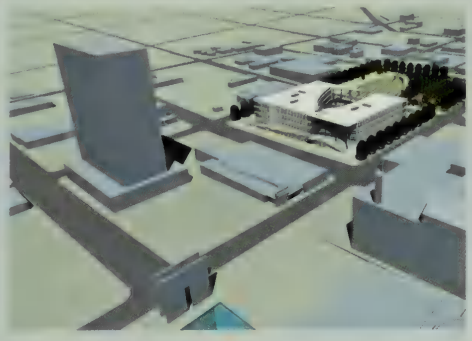
Personnel control

For most building owners, security is primarily related to personnel. Therefore, personnel access control is fundamental to a sound security program and is greatly influenced by facility design. The electronic access-control industry has provided a broad array of tools that control personnel flow based on a combination of memorized personal identification numbers (PINs), electronic credentials (access cards), or some physiological feature, such as a palm print, of the individual requesting access (biometrics). These types of systems have become as essential as HVAC and lighting in a building, because they are less expensive to install and manage than lock systems and are effective in controlling unauthorized access. Efficient application of the available technological tools, however, is dependent on the facility layout.

Nowhere is this more evident than in the facility lobby. In this location, the population consists of individuals authorized access to the facility, visitors who will be allowed into the facility either escorted or unescorted, and, potentially, individuals who, for a variety of reasons, will not be granted access. In addition, the lobby becomes that first point where the reception person/security officer first greets all people entering the building. Especially for visitors, that person becomes the company's ambassador and chief representative. It is important that the lobby design accomplish the following:

Effectiveness. A balance must be achieved between the aesthetics of the lobby and its ability to provide a natural flow of personnel past the security/reception desk. Personnel traffic must ultimately flow





Computer renderings show the conceptual design for the new federal building in Oklahoma City, Oklahoma, design by Ross Barney + Jankowski of Chicago. The scheme shows the architect's attempt to blend rigid security guidelines into a open and inviting work environment.

or truck—a 21st-century moat of sorts—but failure is too hard to predict. "The loads are uncertain, and there's always the chance that a heavy cart or person might cause the grates to collapse," explains Ross Barney. Shifts in planes either through landscaping or staircases raised issues of accessibility. Finally, the architects returned to the bollard solution, cleverly incorporating them into the design to create a ceremonial gateway into the site. Bollards will also run around the entire perimeter of the site, but they'll be hidden in tall, native prairie grass.

GSA now requires architects and engineers to take preemptive measures against what is called "progressive collapse." When one or more structural elements fail, overpressure causes a vertical propagation. After the explosion ripped through the front of the Murrah building, the rest of the structure literally tore itself down. New buildings are required to be engineered to withstand severe local damage and remain standing. For RB+J and New York–based Weidinger Associates, the structural and security engineers on the project, this means designing structural redundancy into the new complex so that the removal of any major structural member will not cause the rest of the members to fail.

The new complex will have laminated glass, which is now required in all new GSA buildings. Laminated glass is commonly two annealed sheets bonded together under heat and pressure by a thick polyvinyl butyral (PVB) interlayer. RB+J will test a rigid frame system with structural silicone glazing, which is expected to have more flexibility if the unthinkable should happen again. Architects can expect to be designing for such grim scenarios for a long time.
Sara Hart

past a minimum number of security/reception desks from a purely economic standpoint. Close cooperation between all design parties is necessary to achieve the desired function within the defined architectural context.

Efficiencies. The security/reception desk must be designed to provide the utmost efficiency in performing a wide range of required

LIKE ALL DESIGN EFFORTS, APPLICATION OF TOOLS IS AS VARIED AS THE FACILITIES THEMSELVES.

tasks. This will involve everything from assisting lost visitors to helping longtime employees with malfunctioning access credentials. The desk should have sufficient space for closed-circuit television monitors, a PC tied to the facility's local area network (LAN), a PC monitoring the facility access-control system, badge printers, and various communication devices.

Convergence. The lobby is also the common traffic-flow point between the above-grade and below-grade floors. Under these circumstances, all stairwells should empty into the lobby to prevent an individual from gaining access to the facility without first passing through the security/reception screening point.

Safer schools

One of the most daunting challenges facing the design profession today is securing schools. Like other public buildings, schools address a focused population of users while maintaining an open and nurturing environment. These are sometimes contradictory tasks. However, the principles discussed above still apply.

Traffic flow. The number of facility entrances must be minimized for efficient monitoring and control of incoming and outgoing traffic; at the same time, the entrances should minimize the distance a student has to travel to the classroom. The use of specific doors is normally controlled electronically to accommodate surge traffic.

CCTV surveillance. A large percentage of schools are installing extensive CCTV systems to monitor and record activities in key locations such as controlled doors, large congregation areas, and major hallways. (CCTV systems are also viewed by law-enforcement agencies as real-time response tool, allowing them to see inside the building and therefore develop an interdiction strategy.)

Contraband screening. One of the most contentious issues at a school board meeting is the topic of contraband screening to eliminate guns, knives, and other potential weapons from the school. Handheld and, to a more limited extent, walk-through metal detectors are currently employed in some situations. Just as these devices are now accepted at airports, their use in schools may also become commonplace. New facility design must provide the infrastructure to support the potential use of such devices.

In those facilities where electronic access screening is required in a lobby, optical turnstiles have been found to be widely accepted. These particular devices use an interlaced series of infrared beams to detect and categorize passage of individuals. The devices can be easily adapted to fit a wide range of aesthetic requirements ranging from corporate lobbies to government installations. Much competition in this particular market segment has resulted in increasingly competitive pricing. Downstream of the lobby, noncontact proximity cards are rapidly becoming the industry standard. These cards contain an antenna that is activated by the proximity reader. Upon activation, the

CASE STUDY

A new paradigm for a 21st-century school creates a safe place for learning



Chesterton High School in Chesterton, Ind. opened this fall with every technological device and architectural amenity that a well-planned 21st-century school should have. Designed by Fanning/Howey Associates of Celina, Ohio, the 500,000-square-foot facility on a 97-acre wooded site has 124 classrooms or teaching stations with sloped projection walls and built-in monitors. All academic spaces are served by a building-wide data network, which supports computer-science labs, multimedia centers, CAD instruction, and other applied-technology labs.

This technological sophistication carries over into specialties as well. An 1,800-square-foot space for the speech and debate program includes practice rooms and operable walls. There are art rooms with kilns, a darkroom, and machine and auto mechanics shops, radio, and television production facilities.

A fitness center supporting a wide variety of sports is a focal point of the school. The gymnasium seats 4,400, and an eight-lane, 22,000-square-foot natatorium with diving accommodates another 600 spectators.

While such state-of-the-art facilities would make any small college envious, there are high-tech elements that make this project remarkable for less enviable reasons. The school is monitored by 125 surveillance cameras positioned throughout the interiors and around the exterior. A security center is located in the administration office suite, where a full-time director observes activity recorded by the cameras and displayed on six monitors.

All classrooms have telephones so that teachers can call the office or the security center if there's an incident. In addition, all staff members, including cafeteria workers and custodians, carry small key-fob transmitters, coded with their names and room and phone numbers, which can relay an alarm to the security center in case of emergency. Locking double doors throughout the facility allow areas to be segregated during the many after-hours community events held at the school. The entire complex is designed around an open, central courtyard, which is accessible from the cafeteria, science labs, and art rooms.

Several campus tragedies in the past few years have created a disturbing atmosphere of uncertainty among school administrators, students, their parents, and the community. For whatever the reasons, Chesterton is their design model and a sophisticated prototype for the new millennium. *S.H.*

card then transmits a unique code identifying the facility and user.

Keep the doors locked

Technology has also matured with regard to the means available for controlling personnel doors. The most common means involve:

Electromagnetic locks. These devices hold a door in a secure or closed position through the use of an electromagnetic field between the coil and receiver plate. Upon presentation of a valid access credential or other access identifier, power is interrupted to the coil, causing the magnetic fields to dissipate and thus releasing the door. Because these devices rely solely on electronic controls for release with no mechanical override, they are not accepted by code in some jurisdictions. Their main attractiveness is ease of installation and high holding power.

Electric strikes. Probably the most common form of door control, the strike located in the jamb is controlled by a solenoid and releases upon presentation of a valid credential or other access identifier. For retrofitting access-control systems, the use of electric strikes often requires modification of the door jamb. These are normally specified as fail-safe and release upon loss of power.

Electric bolts. Using standard door strikes, the electric bolts utilize a solenoid to eject the bolt into the receiver plate. Electric bolts require pretreatment of the doors prior to installation and are therefore somewhat more expensive than use of the common electric strikes.

ONE DIFFICULTY IS THE INABILITY TO LIMIT ELEVATOR ACCESS TO AUTHORIZED INDIVIDUALS ONLY.

Elevator control. One of the difficulties with elevator control is the inability to limit the individuals actually using the elevator to those who are authorized. A very similar problem occurs at card-reader-controlled doors, where the first person in line swipes his card and all the individuals walk in behind him without presenting a valid access-control credential. Short of installation of additional access-control hardware, administrative procedures are the primary solution to this problem. With proper security-awareness training, employees realize

the risk associated with such tailgating activities and assume the responsibility for verifying the access authorizations of those trailing individuals. The problem seems more difficult with elevators; psychologically, it is very difficult to obtain the same level of user involvement as with a standard personnel door. For this reason, many facilities use a portal arrangement at either end of an elevator lobby on each floor to control access into the respective office spaces. While this requires more buildout in the building, it is often less expensive than the costs associated with access-control-based elevator monitoring.

BIOMETRIC DEVICES PROVIDE THE HIGHEST LEVEL OF RELIABILITY WITH A MINIMUM OF DISRUPTION.

It goes without saying that any electromechanical device can fail. This is certainly true of all access-control systems. Therefore, it is prudent to plan for such failure at each access-control point. This normally involves CCTV coverage to observe all aspects of the operation. In the event that someone is trying to illicitly bypass the access-control point or an authorized individual is having difficulty operating the system, the monitoring security officers will have a first-hand view of the situation.

Intercoms should also be provided at each access-control point to allow the user the privilege of talking to the monitoring security officer to request assistance in the use of the equipment. This ease with which assistance can be provided will result in greater user acceptance of the system and more efficient operation.

Corporate environments

Corporate environments share many of the constraints of schools; however, the expectations on the environment are generally imposed internally (by management) with limited external influence. Unlike schools, corporate environments afford high priority to package screening due to the potential risk to the corporate well-being and the demonstrated threat. Noncontact and, in some cases, biometric devices provide the highest level of reliability with a minimum of disruption. CCTV systems can also be employed extensively and strategically.

While technology provides many tools to heighten security at both public and private buildings, facility design can play a key role in providing an efficient, creative, yet secure workplace. Applying basic security principles at the earliest stages of design will result in complementary blend of all design requirements, including security. In an insecure world, architects now have more tools to give their clients security without locking them in fortresses. ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "Maintaining Security in an Insecure World" using the learning objectives provided.
- Complete the questions below, then check your answers [page 242].
- Fill out and submit the AIA/CES education reporting form [page 242] or file the form on ARCHITECTURAL RECORD's Web site at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

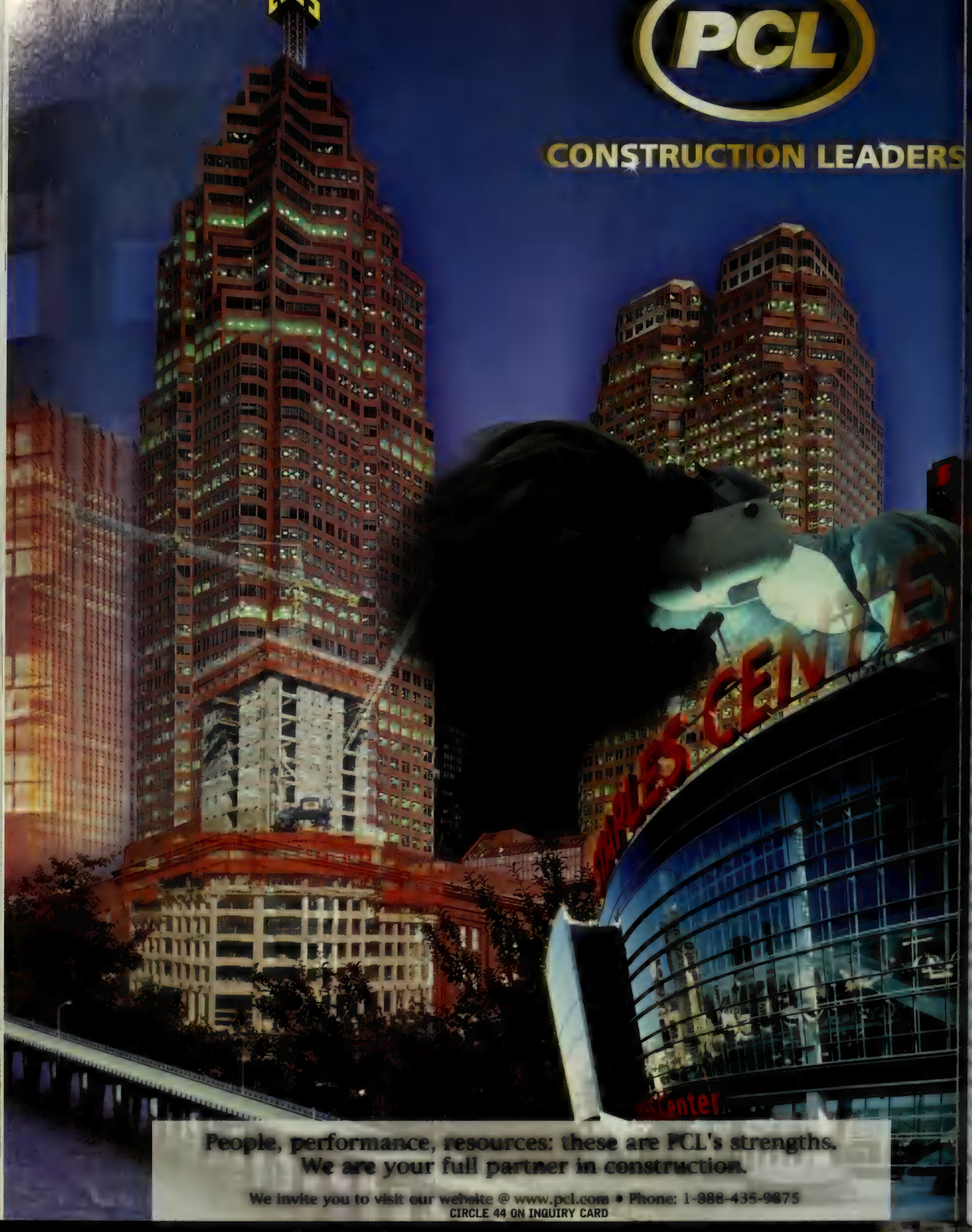
1. What were the conclusions of security discussions after the 1995 Murrah Building bombing?

2. How can environmental design be altered to prevent crime?

3. How is personnel access electronically controlled?

4. What is the importance of the lobby in secured buildings?

5. What are the specific problems in school security?

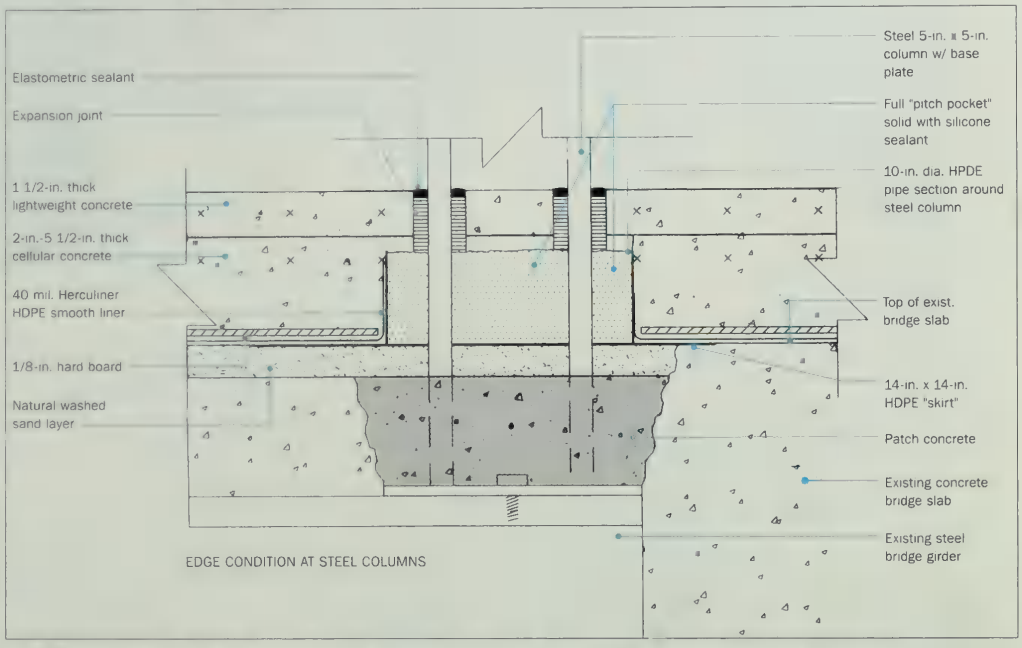

PCL
CONSTRUCTION LEADERS
People, performance, resources: these are PCL's strengths.
We are your full partner in construction.
We invite you to visit our website @ www.pcl.com • Phone: 1-888-435-9875
CIRCLE 44 ON INQUIRY CARD

Tech Briefs

New York architects convert a contaminated dry cleaners into a clean, well-lit place for children • A new building type emerges in the new economy

Architects successfully detox a Brooklyn brownfield

When Kendell Christansen, chairman of the board of the Maple Street School, a private, parent-run, day-care center in Brooklyn, discovered an abandoned dry cleaner at the edge of Brooklyn's Prospect Park and adjacent to a subway station, he knew he had found the perfect location for a new center. The center's architects, the Pratt Planning & Architectural Collaborative (PPAC), determined that the 2,600-square-foot building could be adapted to house the day-care center, despite the need to remove hazardous waste left by the dry cleaner. "We were aware of the the problems a school in Harlem had when reusing a dry-cleaning store," said E. Perry Winston, PPAC's project manager, but no one predicted the additional complications caused by the building's location along a roadway that bridges open subway tracks below the street level.



The architects sealed off the contaminated structure with a high-density polyethelene (HDPE) liner.

In the same way that industrial waste contaminates soil substrate, it can also contaminate building structures and foundations. Highly toxic and stable perchloroethylene (PCE) is the main ingredient in dry-cleaning fluid. Initial testing at the site determined that PCE had contaminated the existing structure. During demolition, core samples confirmed that the chemicals had also penetrated the underlying concrete bridge structure. Removing the contaminated superstructure took care of a significant part of the problem, but removing the substrate was not an option since the bridge is also the Metropolitan Transportation Authority (MTA) infrastructure. The solution required that an impermeable barrier be constructed between the contaminated bridge substructure and the foundation of the new building.

In some circumstances, concrete is sufficient to encapsulate hazardous materials, but not here. Vibrations from the subway and from the heavy automobile and bus traffic on the bridge was certain to cause cracks in the concrete, through which the PCE vapors would infiltrate the structure.

PPAC architects began a search for a membrane that could resist the chemicals and details that would provide resilient yet impervious joints. Based on examples of previous applications and the representations of the capabilities of the materials, the architects considered first an asphaltic and then an elastomeric membrane. Under specific testing by the manufacturer, both petroleum-based products were determined to be chemically incompatible with PCE and were rejected. Finally, consulting environmental engineers AKRF, of New York, referred PPAC to In Line Plastics in Houston. They manufacture high-density polyethylene (HDPE), a plastic so chemically resistant it is used for everything from milk bottles to landfill liners. Working together, PPAC and In Line developed the details and specifications for the installation.

A layer of sand was laid down to level out the uneven surfaces of the bridge. This was covered with a 40-mm-thick HDPE liner with 4-inch lapped and heat-fused joints. "Because the material is so chemically resistant, like Teflon, you can't glue it to any surface," said Curtis Spencer of In Line Plastics. The manufacturer sent trained technicians and specialized equipment to the site to seam the material in a heat-fusion process. HDPE pipe "boots" surround vertical penetrations, the liner is heat-fused to the boots, and the interior is filled with silicone. The edges are secured with stainless-steel battens bolted into concrete curbs.

When the HDPE liner is laid down, it is imperative that it's well sealed, but the sheet loosely covers the sand, leaving a considerable amount of slack. "If there is any downside to the material," explains Spencer, "it is that it has a very high coefficient of thermal expansion." The excess material permits the liner to expand and contract with temperature changes, prompting PPAC to conduct a rupture test. Once the liner was installed, air-monitor tests revealed acceptable air quality and the substrate construction finished with a ⅛-inch masonite board, a layer of cellular concrete (30 PSF), and a final layer of lightweight concrete (115 PSF).

The need to find solutions for safely building on brownfields will continue in urban and suburban sites, requiring architects to explore innovative solutions to unique circumstances. Fortunately, whereas methods and scale will change from project to project, the principles can undoubtedly be transferred from one application to another.

Barbara Knecht

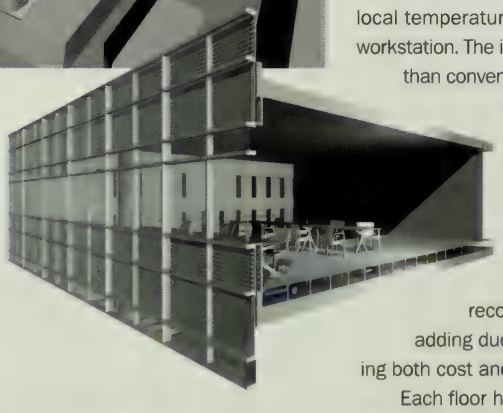
If you build it (right), they will come

If Albany has a national architectural identity, it's Harrison and Abramovitz's controversial, International Style Nelson A. Rockefeller Empire State Plaza, completed in 1979. Otherwise, New York State's capital is a low-profile, medium-size city, eager to be a player in the new economy. Mercer Companies, a real-estate and energy-development operation in Albany, believes that the new economy can flourish in this region, if the city holds onto the information-technology talent graduating each year from local universities. Mercer is speculating that an architecturally iconic commercial development with social and cultural amenities in league with its high-tech infrastructure will be Albany's magnet to attract the best and brightest. Mercer's plan does more than offer pleasant rental space to a few start-ups. Its goal is to create an environment of broad collaboration and cross-pollination of ideas that goes beyond incubating to building a live-work community.

In September 1998, the Mercer Companies asked Ehrenkrantz Eckstut & Kuhn (EEK) of New York City to create a master plan for the development of a nine-block area of downtown Albany to be called E-Comm2, located in a historic, but run-down, neighborhood near the Hudson River. The biggest travesty visited upon the site came in the form an elevated interstate highway, which destroyed the waterfront terminus of a grand boulevard and obstructed views and access to the river. EEK's master plan is designed to restore a sense of place to the area and brand a new commercial district for Albany.

After creating the master plan, Mercer hired EEK to design the first of several buildings, which, according to EEK design principal Ming Wu, will have "groundbreaking infrastructure."

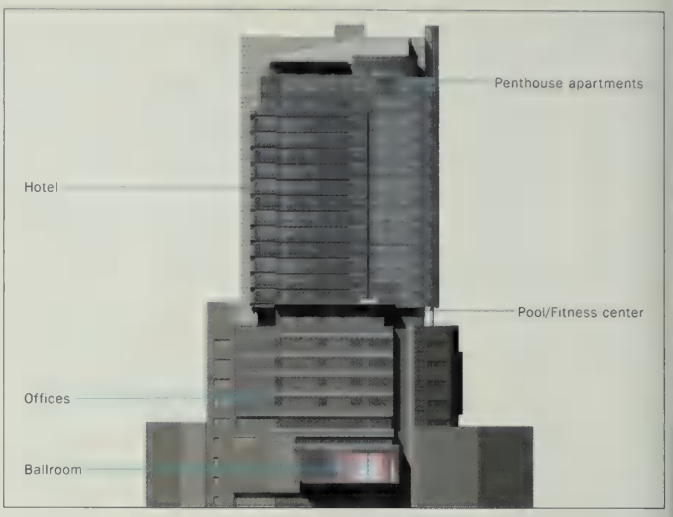




The first project, called One E-Comm Square, includes a hotel, offices, luxury apartments, a fitness center, and two restaurants, all interconnected by a high-bandwidth infrastructure, consisting of an Intel-based "plug-and-work" architecture connected to an OC 48 pipeline backbone (the equivalent of 1,270 T-1 lines).

Besides a state-of-the-art network, EEK is leveraging the latest buildout methods to create elastic work spaces that can accommodate the demand for maximum flexibility in the familiar open office plan. The architects designed a raised floor over a pressurized plenum through which power, voice/data information, and conditioned air are distributed. This system is gaining popularity because tiles can be easily replaced when an area changes function. For example, a new tile with a register can be installed to provide local temperature control at a workstation. The initial cost is higher than conventional mechanical-distribution methods, even without ductwork, but the payback can be quick. Spaces can be quickly reconfigured without adding ductwork, thus reducing both cost and time.

Each floor has a mechanical unit, which utilizes a variable-speed fan. When the number of registers increases, the fan speed can be increased to supply air at a constant pressure. Fresh air is conditioned in this mechanical unit and distributed to the spaces. During heating months, conditioned air in the space is collected 20 feet from the perimeter glass, heated in a hot-water reheat unit, and washed along the window wall.



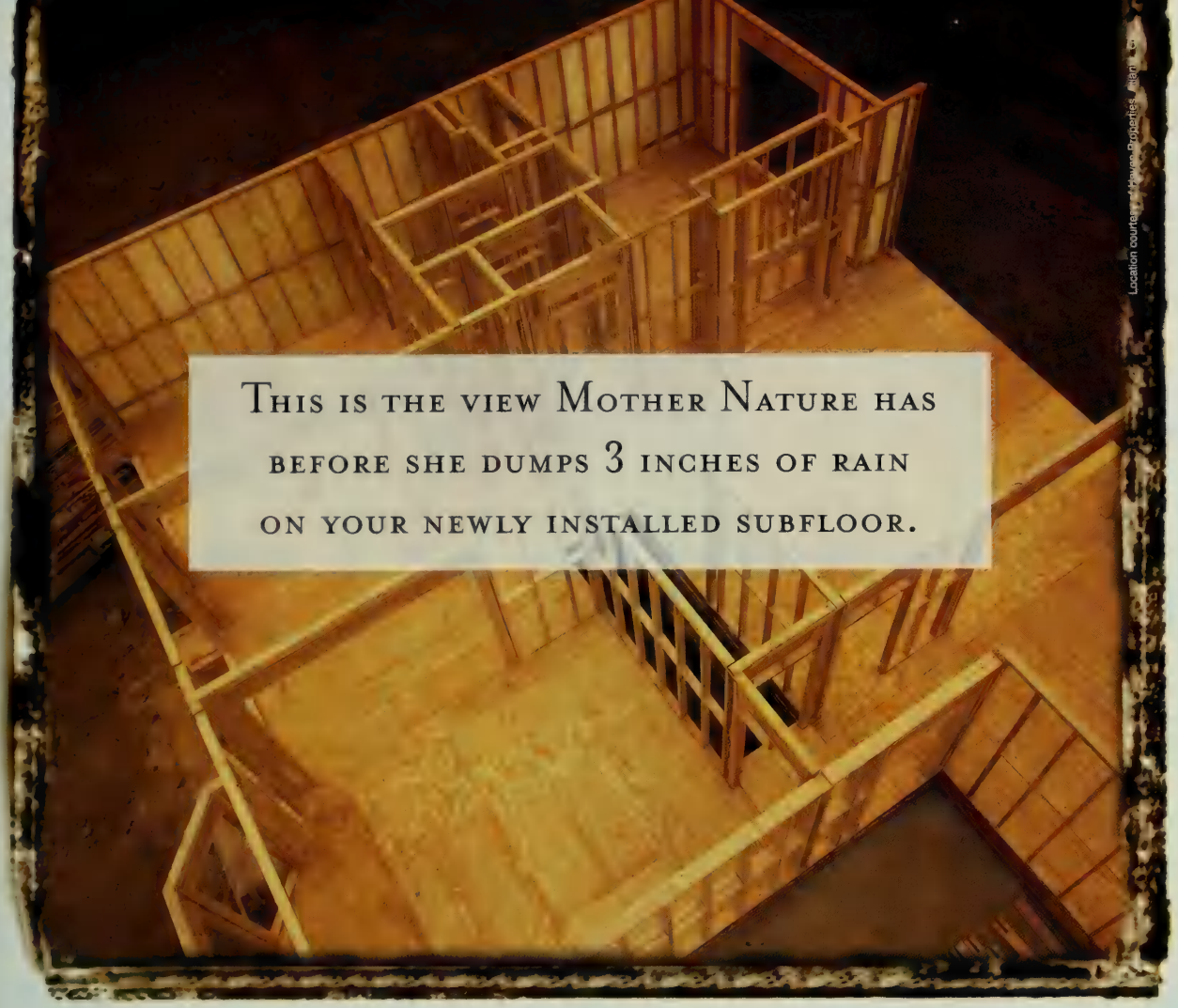
Power distribution has three components: the main distribution box, a secondary distribution box containing separate circuits or groups of circuits, and a service box where the outlets are located. The main distribution box is hard-wired to the building's electrical system (allowing both general-purpose and isolated ground wiring).

Voice/data distribution is also three-tiered: two patch panels per floor, a data hub, and a service box, which is the same as the power outlet. The patch panel is connected to the building's network via fiber-optic cable. High-speed copper wire is distributed to the data hubs, which lead to each service box.

The relocation of a service box to accommodate a new workstation, for instance, can be done by disconnecting the service box, relocating it, and reconnecting it to the same cables. The same distribution and voice/data cabling is used, eliminating the need for a electrician to hard-wire or cut holes.

This project also shows that plunging into the new economy means competing for talent on levels beyond compensation packages and stock options. Mercer and EEK realize that when the competition gets really fierce, good design and thoughtful planning can become the deal makers.

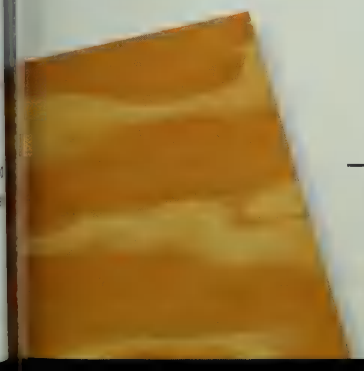
Sara Hart



AREN'T YOU GLAD YOU USE PLYWOOD?

Actually G-P *Plus*™ plywood Sturd-I-Floor to be precise. G-P Plus Plywood Flooring makes a real difference in long-term durability to the homeowner. It performs great when temporarily wet. Plus, plywood is strong, durable, easy to use, and its *proven reputation* has made it the preferred subfloor for over 30 years. G-P *Plus* plywood Sturd-I-Floor with its fully sanded face and improved core allows homeowners the versatility to change floor coverings later, a selling point for you. Don't settle for substitutes, trust G-P *Plus* plywood Sturd-I-Floor, the quality choice that quality builders build their reputations on.

REAL WOOD PLYWOOD. DON'T SETTLE FOR SUBSTITUTES.



For free sales sheets and counter card,

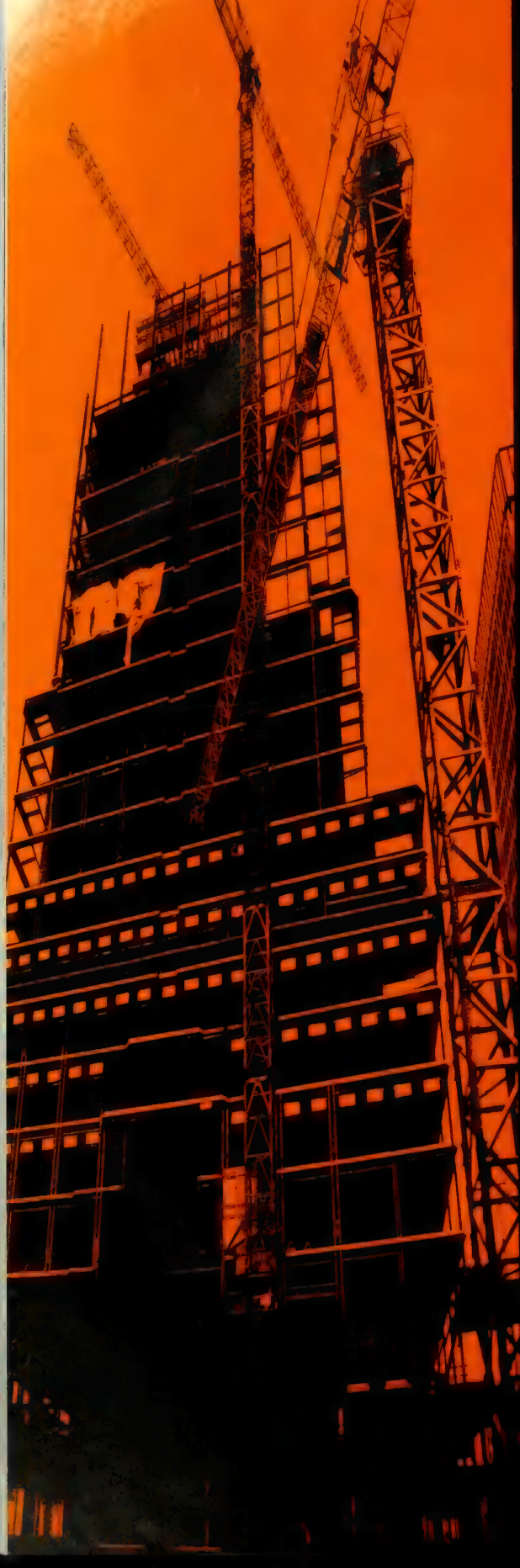
Call 1-800-BUILD G-P (1-800-284-5347)

Georgia-Pacific

visit our website at www.gp.com

CIRCLE 45 ON INQUIRY CARD

STURD-I-FLOOR is a registered trademark of APA-The Engineered Wood Association. ©2000 Georgia-Pacific Corporation. All rights reserved. G-P Plus is a trademark of Georgia-Pacific Corporation.



SLEEK LINES SUBTLE CURVES AND GRACEFUL NEO CLASSIC ARCHES

MAKE SURE THEY BUILD IT THE WAY YOU DESIGNED IT.

buzzsaw.com™
an Autodesk® venture

Set up a personalized project site on Buzzsaw.com's secure servers and get your whole team working together in a matter of minutes. Register the members you want with the permission level you choose, and use your central workspace to track decisions and changes throughout the project lifespan. From design collaboration, to bidding and buying, to construction management, it's all in a day's work at Buzzsaw.com.

CIRCLE 46 ON INQUIRY CARD

THE DIGITAL PRACTICE



BE WARY OF THE GENERATION GAP BETWEEN SENIOR ARCHITECTS WHO ARE NOT EXPERT COMPUTER USERS AND JUNIOR STAFF WHO ARE.

One of the feature stories in this section, "Challenges for the Digital Generation," examines what has happened to our profession during its transition from a paper profession to a digital one. The end of the paper epoch began in 1985, and its digital counterpart was in full swing by 2000. During this period, powerful computers became so inexpensive that any professional could have access to one; software was sophisticated enough to do almost anything, and the Internet had reached a point where it was possible to access or transmit information instantly anywhere in the world. Our story cautions that we are still in transition. We should be wary of the generation gap that seems to have emerged between senior architects who are not expert in the use of computers and junior staff who are. The older generation may not be appreciated for what is perhaps an established office's greatest asset: "human databases" with decades of accumulated experience in how buildings go together and what it takes to get them built.



I've heard that parents of video-game-playing children must occasionally embargo the techno toys and insist that the kids go outside and play baseball or ride their bikes. By the same token, I worry that students and interns who have never gone through the experience of designing and drawing a building by hand, and observing its construction in the field, are missing much of the joy that is intrinsic in being an architect. Clearly, computers are here to stay. But, to the digital generation, we say, computers are no substitute for pencils. Don't deny yourselves the joy of learning the nuts and bolts of the building process and expressing yourselves on paper. —*Charles Linn, AIA*

165 **Digital Briefs**
By Deborah Snoonian, P.E.

168 **Challenges for the Digital Generation**
By Jerry Laiserin, FAIA, and Charles Linn, AIA

170 **Touch versus Tech: Hand-drawn or computer-rendered techniques**
By Evan H. Shu, AIA

175 **Digital Architect:**
By Jerry Laiserin, FAIA

179 **Digital Reviews**
By Jerry Laiserin, FAIA

© Copyright 2000 Autodesk, Inc. Autodesk is a registered trademark and iDesign is a trademark of Autodesk Inc. in the U.S. and other countries.



iDESIGN™

SUDDENLY YOUR THINKING BECOMES POSITIVELY LUMINOUS.

Never have your ideas blossomed so brilliantly. Never have the boundaries of architectural design been broken down so willingly. And never has there been a creative environment so open to innovation. Now Autodesk combines the potential of the Internet with exceptional new design technologies to help you realize your very own vision. See what iDesign can do for you: www.autodesk.com/bloom.

autodesk®

Digital Briefs

Citadon becomes one of the two largest extranet providers

Merger marks one company's evolution in online project management

The recent merger between Bidcom and Cephren to form Citadon (www.citadon.com) signifies the start of a new epoch in the $100 million extranet services industry: one with fewer competitors who may offer more standardized platforms along with a wider variety of online services.

"It's the kind of consolidation that has been long predicted," says Paul Orr, editor emeritus of *Extranet World*, an industry newsletter. Estimates of the companies offering extranet services to AEC firms range from 150 to over 600. "It's clear that the demand for online project-management tools, while growing, cannot tolerate the number of companies that exist today," Orr adds.

THE MERGER OF BIDCOM AND CEPHREN IS THE KIND OF CONSOLIDATION THAT HAS LONG BEEN PREDICTED.

The merger created a company responsible for managing over $110 billion worth of projects from clients such as Fluor Daniel, Bechtel, and GE Power Systems, making it one of the two largest extranet vendors, along with the one-year-old Buzzsaw (www.buzzsaw.com). But Citadon will be a different entity from the two companies that formed it. "Bidcom's focus was on standardizing business processes used by AEC firms on all projects, such as submittals and change orders, and Cephren's strength was managing project documents such as plans and specifications," says Sal Chavez, senior vice president of collaborative services for Citadon. "We felt that merging the two companies allows us to be more responsive to our customers' needs."

With their promise of streamlined communications, reduced paperwork, and shortened project-delivery times, it's no wonder the demand for extranet services has risen steeply since their inception over three years ago. Extranets are essentially electronic repositories on the Internet where AEC firms can store project information. Team members in different geographic locations can view, change, and update project documents such as CAD files electronically. Calendars, schedules, and other information can also be tracked online to establish a single, paperless, easily accessible record. Citadon and Buzzsaw are also jockeying to establish themselves as one-stop portals or "vortals" for the building industry by offering a suite of services that allow customers to transact all of their business online—searching for RFPs, submitting proposals, managing plans and specifications, purchasing building products, and so forth.

Most extranet vendors charge AEC firms a monthly fee to host projects, although some, such as Buzzsaw, allow customers to use select extranet features at no cost "to provide an easy on-ramp to project hosting," says Chris Bradshaw, vice president of marketing for Buzzsaw.

"We find that as customers realize the benefits of extranets," says Bradshaw, "they quickly become willing to pay to use optional add-on services." Probably because it offers some free services, Buzzsaw has a greater proportion of single-entity and small-business customers, whereas Citadon's clients are mostly large design firms and contractors who have more capital to invest.

On the whole, consolidation of the extranet market is good news for customers, but it raises questions about what these services will look like in the future. With fewer vendors in the playing field, AEC firms are now in a better position to push for standardization of platforms—a benefit for busy architects who feel overwhelmed by the multitude of options available for managing projects online. Yet some industry analysts feel that standardization, although inevitable to some degree, is not imminent, and that it hamstrings a vendor's ability to offer unique options. And the portal concept for the building industry—in which a firm could theoretically submit bids, select subcontractors and suppliers, revise plans and specifications, and manage construction at the click of a mouse with virtually no paper-shuffling—is intriguing but largely unproven.

The removal of the face-to-face component, in which deals were closed with a handshake, represents a radical culture shift that many firms are skittish about. And they may feel they lose competitive advantage on pricing of materials and services if they are restricted to using what's available online through their extranet service providers.

It remains to be seen which companies and business models will prevail, but one thing is certain: project extranets will one day be as commonplace in architects' offices as CAD workstations." We're not seeing just a groundswell of enthusiasm for these services," notes Bradshaw. "It's more like a tidal wave."

—Deborah J. Snoonian, PE

One and one equals more than two

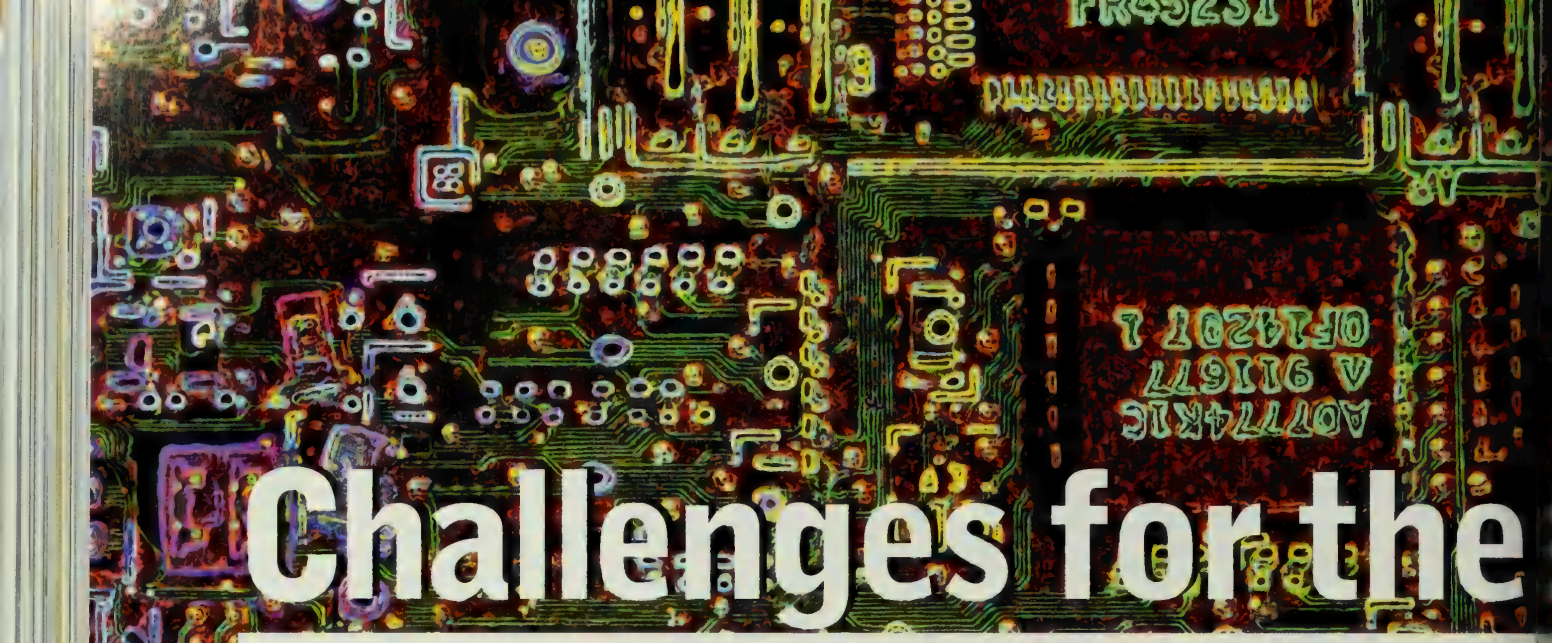
The Bidcom-Cephren merger leverages the different strengths of two companies to help it compete with the likes of Buzzsaw. Here's how:

Bidcom → **Cephren** → **Citadon**

Bidcom's focus was on standardizing business processes, such as submittals and change orders, which are used by AEC firms for all projects.

Cephren's strength was the management of project documents, such as plans and specifications.

Citadon will combine the strengths of Bidcom and Cephren but become a different entity. It will be one of the only companies to offer more standardized platforms, along with a wider variety of online services.



Challenges for the Digital

By Jerry Laiserin, FAIA, and Charles Linn, AIA

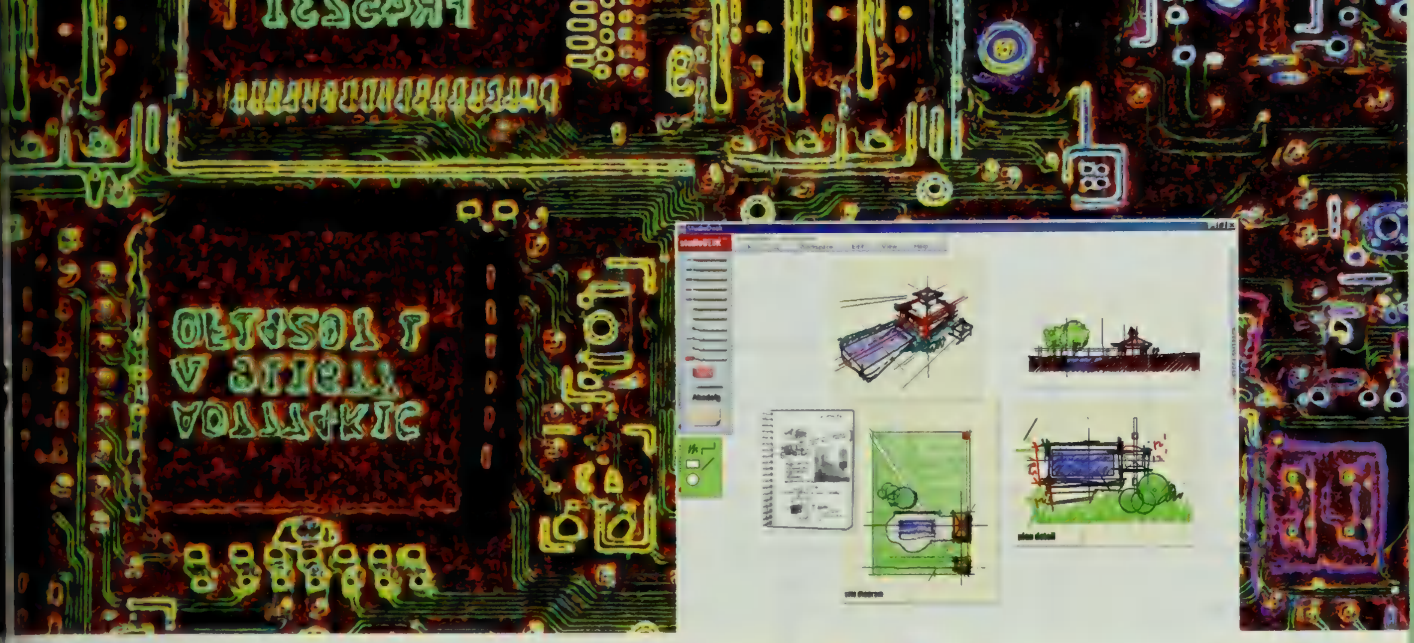
Is the emphasis on **digital tools** leading to the neglect of **important skills** that have always been a **fundamental** part of an architect's education?

Digital technology is significantly changing design culture and influencing our core understanding of what it means to be an architect. Students in almost every school of architecture today will graduate with fluency in a new language—a digital one. As students and interns, they effortlessly access suites of software tools that allow them to work more quickly and accurately than any architects have before. Even the design portion of the Architectural Registration Exam now assumes a minimal level of CAD proficiency.

But some established architects are having difficulty accepting these changes. They worry that the emphasis on teaching digital tools has led to the neglect of other fundamentals. Not too long ago, an anecdote circulated among New York firms about an architect who refused to hire a young graduate who was an extremely talented and CAD-proficient designer, but whose handwritten job application was illegible. "Architects have to know how to letter," the architect said. This seems like a loss for both the firm and the candidate. After all, a person should be able to learn lettering much more easily than learning to design well or use a computer.

Welcome to the new generation gap

Young designers often think their seniors do not know which end of the digital pencil is up, while to seasoned practitioners, the design methodology of the younger generation looks like a video game in slow motion. Much of the current miscommunication within firms arises from the loss of hand drawing as a common medium. "It is increasingly difficult to find young architects who can draw," says Don Weinreich, AIA, a senior



Generation

associate at Polshek Partnership in New York. Cathi House, AIA, a partner in House + House in San Francisco, is a firm believer in the benefits of digital technology, but she insists that young architects in her firm be able to draw an entire project by hand before they can switch to the computer.

Unfortunately, computer technology has not yet matured into an adequate replacement for drawing as a medium of communication. In some ways, the technology can even hinder the mentoring that has always been one of the basic building blocks of an architect's education. Older principals report that overseeing work was a lot easier to do when designs were on full-sized sheets laid horizontally on boards. Looking over someone's shoulder at an isolated detail or at a fragment of a larger drawing on computer monitors can be frustrating for mentors and protégés alike.

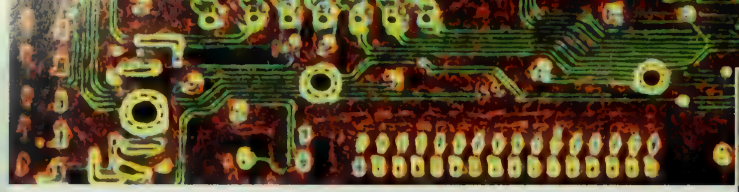
This is particularly true when the mentor fails to grasp how to use the input and output tools and commands of the new medium, for the new medium doesn't yet lend itself to easy cross-generational sharing. Older professionals find themselves having to resist the temptation to tape a piece of paper over the intern's monitor and trace over it—and some are reported to have done exactly that. As a result, the desk crit—which traditionally served as the primary exchange between teacher and student or principal and intern—has lost some of its effectiveness and at times has devolved into a forum of contention.

All of this technological ability comes at a time when, in many smaller, younger firms, no one attains—nor even aspires to—such gritty positions as job captain or senior detailer, which once were the backbones of practice competency. When you combine the scarcity of seasoned mid-level architects, many of whom fled the field during the last recession, with the crushing workloads caused by the current boom, you find proportionately fewer senior staff members to mentor budding designers. Young architects often overlook the pragmatic quality and the emphasis on ease of construction in work they admire. The engineers and fabricators who worked with Frank Gehry on the Experience Music Project [OCTOBER 2000, page 173] make much of the fact that Gehry and his staff are extremely concerned that so complicated a building be as practical to build as possible. Although digital modeling made possible the engineering and fabrication of this extremely complex project, at some point the architects had to understand and collaborate with the other trades in order to determine how the building would be built. Without careful guidance, a generation of digital designers runs the risk of embracing form without function.

Will efficiency lead to generic design work?

The increasing efficiency and declining cost of digital technology allow small firms to appear—and, in many ways, to be—bigger than their head count would imply. It now takes fewer heads and hands to design and document the same dollar value of construction in place. Architects can use the time and money "freed up" by the computer to do more analysis, additional design studies, and further detailing. Internet connectivity and online collaboration make even the most specialized information and esoteric expertise universally accessible to designers, regardless of the location, size, or age of their firms.

COURTESY OF DOODERS LOUD, AIA; AUTODESK, INC., 2000





But new digitally derived efficiency also can be exploited by clients who want to drive down fees while demanding more service from the architect in shorter time frames. Under that kind of pressure, it is easy for mere information to take priority. Firms have to be careful that their computers don't become repositories of standard details and specifications that serve as substitutes for creative detail development. Inexperienced architects also may be tempted to rely on standard details without understanding when or why to apply them in specific circumstances. Again, this is a situation where expecting young architects to work without the help of a mentor may be, for the firm, like walking a tightrope without a net.

The eye-hand connection

Learning to draw has long been a crucial skill for architects. It helps develop the ability to imagine spaces and to express what can be imagined. It demands neuromuscular training of the brain, hands, and eyes. Increasingly, the goal of many CAD, modeling, and visualization programs is to replace drawing as much as possible. Making the coordination of plans and elevations or the construction of perspectives completely automatic short-circuits the mastery of traditional skills. It is not yet clear that mastering the 3-D fluidity of the computer screen helps architects-to-be develop the same spatial and expressive abilities as learning to draw by hand.

The tendency today is to rely on software and more physical model building than was used in the past. Clever software designers, especially those serving graphic-arts markets, have devised drawing and paint programs that simulate much of the appearance and behavior of manual media, from gouache to pastels to airbrush. And teacher/practitioners such as Hans-Christian Lischewski have pioneered the application of filter effects from image-processing programs such as PhotoShop to computer-generated renderings, creating a softer, more hand-drawn appearance. CAD add-ons, such as LiveStyles for ArchiCAD or Squiggle for AutoCAD, can make even 2-D CAD line work look hand drawn (Squiggle even has a "cocktail napkin" setting). AutoDesk is working on a software prototype called StudioDESK that relies on a stylus and touch-sensitive display to digitally simulate tracing, sketching, and rendering with pens, pencils, or markers.

TECHNOLOGY CAN EVEN BECOME AN OBSTACLE TO THE MENTORING THAT ALWAYS HAS BEEN A BASIC BUILDING BLOCK OF AN ARCHITECT'S EDUCATION.

Ironically, as such computer tools evolve and become more intuitive, their output increasingly resembles work done on paper. It may seem absurd to use a computer and printer in an attempt to replicate the look of any medium that has traditionally been created through applications on canvas, vellum, or mylar. If what is wanted is a charcoal drawing, why not execute the drawing in charcoal? Of course, whether the medium is real charcoal or digital charcoal, the task is difficult if a person has not learned to draw.

Experience still counts

Digital tools also enable architects to revisit the leitmotif of non-Euclidian geometry that runs through the design canon from Borromini, Gaudi, and Mendelsohn, to Corbu at Ronchamp—and through non-canonical masters such as Lapidus and Lautner. For example, the descriptive ability of digital documentation allows Frank Gehry to build free-flowing design geometries that previously would have been impossible to realize. Architects such as Greg Lynn rely on the procedural nature of software manipulations to explore folded, segmented, and interlocking geometries. Peter Eisenman has said that he exploits the generative possibilities of design software to inform form.

Working directly in 3-D computer models, any architect can explore hundreds of perspectives or analyze digitally animated paths and processions faster than it used to take to construct and render a single view by hand. And, the ability to focus on design issues early in their careers seems to have helped many young architects mature sooner and progress farther and faster than earlier generations of practitioners. Again, it must be pointed out that architects such as Gehry, Lynn, and Eisenman were schooled before computers were commonplace and bring decades of hands-on experience to the digital realm.

Computers can help architects not only with the generation and exploration of form, but also with the rapid execution of mathematically rigorous calculations and simulations of daylighting and electric-lighting effects, as well as a host of other design factors, ranging from structures and acoustics to energy performance. But to analyze the results of such simulations and draw intelligent conclusions from them still requires experience.

It is easy for the novice to be misled by computer-rendered lighting effects, for example. Even though a rendering can show where a beam of light would strike a wall or floor and can simulate reflections, it is beyond the capabilities of today's computer monitors to reproduce the actual brightness and contrasts that will be experienced in the room when the lighting is installed. Compensating for this distortion and predicting the true intensity is something that comes from practice, not from the program.

On the positive side

Computer technology extends the reach of architects across all practice areas, not just design. Software for financial management, project administration, marketing, proposal generation, and other practice chores has

steadily reduced the amount of time required by nondesign staff in an architectural office. Of course, much of this benefit has been offset by increased demand for computer-support personnel, as well as the capital requirements of procuring, maintaining, and upgrading all the hardware, software, and networking systems needed in order to be competitive in today's design economy.

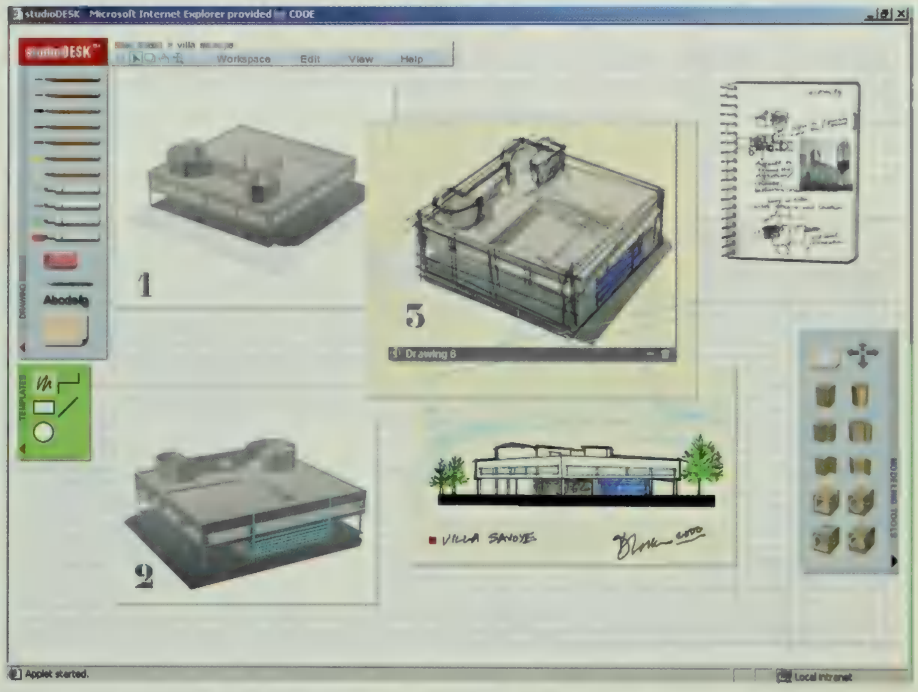
But computers can help make money too, enabling architects to expand their service offerings into areas such as facilities management, design-build, and technology infrastructure consulting. The same technological capabilities expand clients' expectations of what architects can do—especially in the realm of "broadcast-quality" imaging and animation—as well as how quickly and inexpensively they can do it. These effects do not apply to architectural firms uniformly. Large firms enjoy economies of scale with respect to shared resources, such as file servers, plotters, fancy rendering software, and the ministrations of nonbillable technology staff. Smaller firms have the compensating benefit of being able to "practice large." Established firms, with a mix of post- and pre-computer-literate staff, must endure the concomitant miscommunications, diminished mentoring, and so on.

Changing what it means to be an architect

As more architects graduate with the knowledge of how to use computers and as they apply these tools throughout the profession, the generation gap in technological savvy will eventually disappear. Young firms, composed exclusively of computer-centric principals and even younger whiz kids, already operate in a uniformly supportive computer culture—so much so that most cannot disentangle computer culture from practice culture. Regardless of firm size or age, the ranks of architects who know buildings but not computers are dwindling. At the same time, architects who know computers but not buildings continue to increase their mastery of the body of knowledge that marks the seasoned professional. Demographically, these trend lines will cross within the next 10 years. That milestone will mark a "tipping point" when all practice becomes digital.

Such a tipping point occurred once before, with the introduction of the blueprint machine. Suddenly, an unlimited number of sets of drawings could be inexpensively and quickly distributed to contractors and subcontractors. This improved communications among these parties and also helped standardize the nomenclature and the presentation of drawings. But the rapid transfer of information also represented a massive transfer of power and authority from the architect to the contractor, transforming the ways architects, owners, and builders related to one another. The resulting shift in the contractual basis of projects was the beginning of the end of the architect as master builder.

Contractually cut off from the means and methods of construction, architects have become brokers of information and services, as well as people who devise solutions to spatial problems and draw and write sets of instructions so that others can construct them. Just as the blueprint machine changed the speed with which information was transmitted, the recipients of that information, and the level of detail and completeness of information required to be transmitted, computers and the Internet are driving these changes to another level. Increasingly, architects will be valued for their ability to navigate through vast amounts of Internet-supplied data to specify materials and components. In a process known as "mass customization," every building element can be manufactured to order, enabling architects to instruct machines, rather than construction workers, to fabricate and assemble buildings. In this way, the computer, may in fact, return the architect to the status of master builder. ■



A prototype view of a new product by AutoDesk shows how digital "tracing paper" can be overlaid on top of a live 3-D model of Corbusier's Villa Savoye. It seems that the more sophisticated the new digital tools become, the more they resemble paper.

WWW *For extensive coverage of digital technology for architects, go to* ***Digital Architect*** *at* ***www.architecturalrecord.com***

Touch versus Tech: Hand-drawn or computer-rendered techniques

IS IT COMPETITION OR COLLABORATION FOR TRADITIONAL DRAWING AND EMERGING COMPUTER METHODS? TWO LEADING PROPONENTS FORM AN ALLIANCE TO COMBINE THE BEST OF BOTH WORLDS.

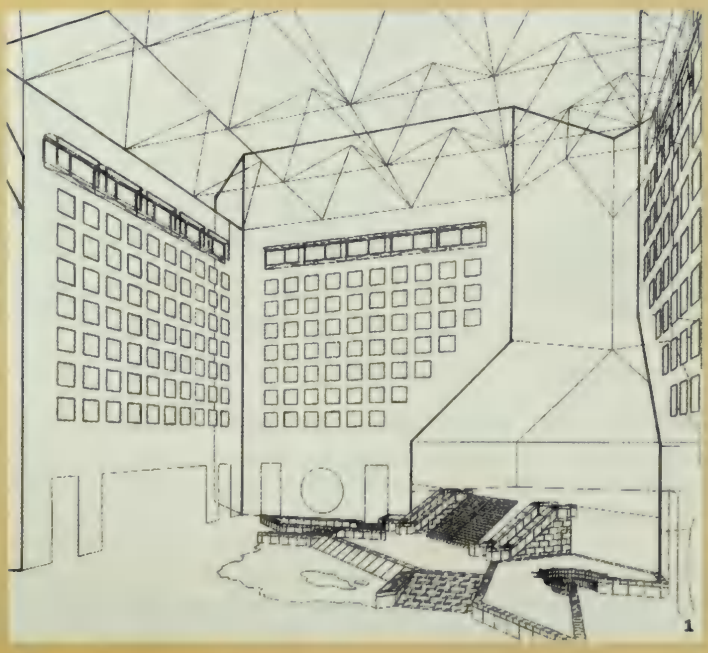
By Evan H. Shu, AIA

Too many in the architectural profession, it has felt almost like an invasion. Over the last 15 years, emerging computer methods have overtaken the former reliance on drawing boards and tracing paper. The computer generation found its first "beachhead" in the realm of contract and production drawings and has since made substantial inroads into the areas of design and schematic representation, particularly as digital tools have gotten easier to use and less expensive. However, if there is one persistent pocket of resistance to expanding computer technology, it is in that realm that starts with the quick pencil sketch and progresses to the finished architectural illustration. This setting is providing all of us with some instructive lessons on the very nature of two competitive worlds, which might be termed "Touch" and "Tech."

Evan H. Shu, AIA, is principal architect with Shu Associates in Melrose, Mass. He is also editor and publisher of Cheap Tricks, *a monthly newsletter for DataCAD users.*

In the latest awards program of the American Society of Architectural Perspectivists (as published in their *Architecture in Perspective* 14), only a small handful of the 58 award-winning entries were computer-generated images, though a much higher percentage certainly relied on underlying computer-generated wireframes to help produce their images. The jury report itself was boldly headed with the motto "As long as we draw, we are architects."

In attempting to keep an open mind, jury chair Michael Willis, FAIA, wrote that the jury "decided to check orthodoxy at the door and concentrate only on whether or not the drawing was a convincing representation of the subject, regardless of the medium used . . . as each of the judges was a techno-dinosaur with a background only in traditional drawing and painting." Still, there was much criticism of computer-generated work by the jury, as evidenced by comments such as "too much extraneous detail," and "how stiff they are!" and "the light level is cranked up to a meltdown, where it's so bright that no one would want to walk in."





Oles worked with AMD to establish the best viewpoint to create the computer wireframe (left) for this atrium view of the Beijing Bank of China by the Pei Partnership in 1995. He then used this wireframe to create his value study to establish lighting hierarchies for the major spatial planes.

One gets the feeling that architectural perspectivists are clearly feeling the heat of the onslaught made by the brave new world of technology. Gordon S. Grice, editor of the *Architecture in Perspective* publication, writes: "Clearly, the gradual intrusion of computer imagery, with its relentless precision, has forced 'manual' rendering into a more relaxed mode."

Into this "us-versus-them" context now comes evidence of a refreshing new alliance between the worlds of Touch and Tech at the highest levels. Paul Stevenson Oles, FAIA, of Interface Architects, and the partners of Advanced Media Design—Jon Kletzien, Richard Dubrow, and James Kuhn—have each won the American Society of Architectural Perspectivists' highest award, the Hugh Ferriss Memorial Prize.

Oles won the 1996 award for a haunting wax-pencil rendering of a Paris office tower designed by Henry N. Cobb, FAIA. Advanced Media Design (AMD) won the 1997 prize for the equally powerful computer rendering of Friedrich St. Florian's entry for the World War II Memorial competition for the Washington Mall, a depiction is noteworthy for being the first and only digital rendering to have won the prestigious Ferriss prize.

As accomplished as these two firms are in using their own respective media, they are currently working to combine their skills to execute "hybrid" renderings that use the best of both Touch and Tech worlds. Both firms see enormous potential inherent in the seamless fusing of hand-drawn (or chirographic) work with digital (cybergraphic) images to create, as they write, "a new phenomenon . . . a unique, graphically integrated approach to the hybrid imaging of architecture."

Oles observes that there is natural suspicion between these worlds. "Touch lives and works in growing fear that Tech, with its invincible computers, will sooner or later 'move in' or 'take over,' obviating the need for practitioners with merely traditional skills," he says. "Tech, on the other hand, often perceives Touch as becoming rapidly irrelevant, obsolete, and dispensable." Oles and Kletzien have done some systematic thinking and delineated each method's strengths and weaknesses. A few of these differences can be described briefly as follows.

Touch employs easily accessible materials and tools for visualization (pencils, pens, markers, paints, etc.). Its ability to handle key visual and design issues, such as ambiguity (necessary for the very process of graphic investigation), and its ability to allow intuition to trigger spontaneity and creativity are as yet unmatched by computer techniques. Most observers also agree that, in general, Touch produces certain contextual items, such as landscape, sky, and people, more easily, quickly, and certainly more effectively than Tech can accomplish at present.

On the other hand, Tech is much better at conveying with precision the geometric complexity of a built form as generated via mathematical means. Tech can more easily and quickly provide any number of finished variations to a computer-based model, showing altered lighting, material, or viewpoints as chosen by the designer. In addition, Tech can take a more practical team approach, allowing several people to work both independently and simultaneously on different aspects of a computer model or image.

EMERGING COMPUTER METHODS HAVE OVERTAKEN THE FORMER RELIANCE ON DRAWING BOARDS AND TRACING PAPER.

While many architectural illustrators now routinely depend on computer wireframe work to undergird their hand-drawn work, Oles, together with the designers at AMD, has taken collaboration several steps further. Some of their early efforts were to strictly partition the imaging area, allowing AMD's digital imaging to provide the actual ren-



3



4

dered building while Oles would provide the surrounding entourage of sky and landscaping. They found that they could "ping-pong" a rendered illustration back and forth several times between their Touch and Tech methods.

A good example is work done for the interior atrium view of the main headquarters for the Bank of China building in Beijing, as designed by the Pei Partnership. Oles helped AMD select the most advantageous station viewpoint from which to generate the simple space wireframe (Figure 1). By hand, eye, and experience, Oles then did a preliminary value study (Figure 2), giving a lighting hierarchy to the major planes. Working back and forth a few times, AMD then produced a digital "pre-rendering" output of the space (Figure 3). Note that this "pre-rendering" might include scanned sky backgrounds and other entourage texture as taken from Oles' hand-applied layerings from pre-

OLES ENJOYS SEEING THE SHOCKED FACES OF HIS COLLEAGUES WHEN HE ADMITS HIS RENDERINGS ARE TECH-TOUCH HYBRIDS.

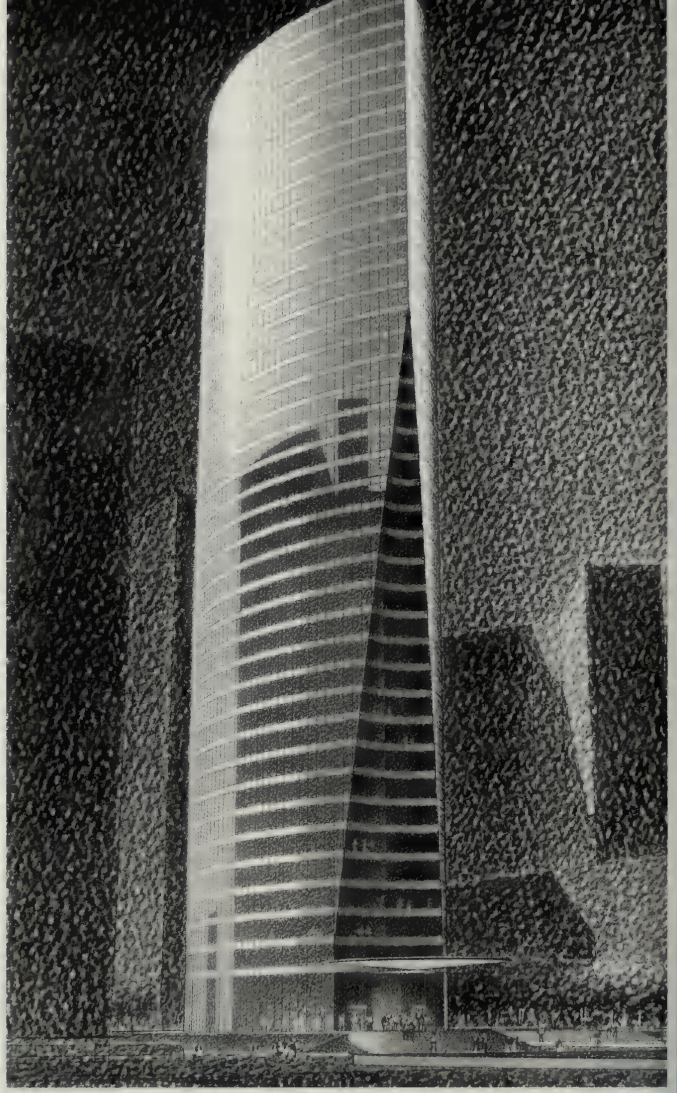
vious exchanges. In this case, Oles then took the last "pre-rendering" from AMD and applied the last layers of "value shading," highlights, as well as lighting, landscaping, and people, to achieve the impressive final result (Figure 4).

Another example of collaboration can be seen in the rendering for the Cybercampus in Shenzen, China, as designed by the Pei Partnership. Again Oles' value study over the AMD generated wireframe (Figure 5) presages their ping-pong process to the final rendering. This hybrid image employs a digital Iris-print on handmade watercolor paper to which selective layers of hand-drawn, wax-based colored pencil are then added to achieve the final result (Figure 6).

Oles says that he enjoys seeing the stunned disbelief on the faces of some of his very accomplished perspectivist colleagues when he admits that a rendering such as his Brooklyn Federal Court by Cesar Pelli and Associates is a collaborative hybrid work produced with the digital imaging firm AMD.

In this collaboration, the very efficiency that leads to a superior graphic effect also results in a fee structure that is as much as 20 percent below what Oles would charge for doing the entire work.

These two allies are firmly convinced that the worlds of Touch



Paul Stevenson Oles, FAIA, won the Perspectivist's highest award, the Hugh Ferriss Memorial Prize in 1996, for this wax-pencil rendering of a Paris Office tower designed by Harry N. Cobb, FAIA.



5



6

Another example of the hybrid collaboration between Touch and Tech is seen in this rendition of the Cybercampus in Shenzen, China, by the Pei Partnership, 1999.

and Tech will continue to come closer together. Already we see computer software programs that emulate impressionistic watercolor style or even an individual's unique artistic approach. "It is an evolving medium whose presence as a tool has been here for only a minuscule percentage of the time that the pencil has," says Kletzien. "Technical innovation will continue to remove many of the current barriers between the user and the product."

"I believe that Touch and Tech will increasingly rely on and borrow each other's methods and sensitivities," says Oles. "In fact," he asks, "are the two worlds so different? There are arguably more affinities than differences between the two. What is Tech or Touch? Where does one end and the other begin? It depends to some extent on when you ask.

"Today's Tech is tomorrow's Touch: the cherished T square gave way bloodlessly to the parallel rule, as did the slide rule to the calculator. The computer represents not just a drafting shortcut but a powerful and potentially revolutionary tool in the hands of designers. Therefore, it may seem particularly daunting to many who are comfortable in familiar, if less efficient, ways of working."

The inevitable result of this evolving collaboration between the worlds of Touch and Tech is exemplified by another joint image for the Christopher Newport University in Newport News, Va., as designed by the collaboration of Pei Cobb Freed/Charles Young/Hanbury Evans Newill Vlattas Architects.





With this beautiful rendering of the Christopher Newport University in Newport News, Va., the Touch-Tech partnership evolves yet another step, with Oles functioning as an art director for the fully digital result (top). The first and only Hugh Ferriss Prize awarded to a fully digital rendering went to Advanced Media Design in 1997 for this powerful rendering of Friedrich St. Florian's entry for the World War II Memorial competition for Washington Mall (bottom).

In this case, Oles did not provide any hand-drawn overlays at all, but instead functioned as an "art director" to AMD for the final output—choreographing light values, sky effects, and building highlights through preliminary but detailed hand-drawn value and color studies. A consensus on fine tuning was reached by Oles and AMD as the work progressed to completion. The final image is fully digital, yet it achieves a certain transcendent quality that escapes most digital imagers working alone.

INTO THIS "US-VERSUS-THEM" CONTEXT COMES EVIDENCE OF A REFRESHING ALLIANCE BETWEEN TOUCH AND TECH.

As Oles and AMD suggest, "Tech" may be only another synonym for the more innocuous word "tool"; Touch may have its ultimate residency not in the hand but in the human mind. And therein lies the key to uniting the two worlds. As Oles succinctly states, "Even the most powerful tool must be actuated and manipulated by human intention—at least for the foreseeable future." ■



Many traditional perspectivists are surprised to learn that this rendering by Oles and AMD (Brooklyn Federal Court by Cesar Pelli & Associates, 1999) is a hybrid Touch-Tech effort.

WWW *For extensive coverage of digital technology for architects, go to* ***Digital Architect*** *at* ***www.architecturalrecord.com***



WHO IS THE LEADER EVERYONE LOOKS UP TO?

e-Builder. BUILT FROM THE GROUND UP, AND STILL MAKING BIG THINGS HAPPEN.

In a world where other competitors merge, posture and otherwise play at construction, manage your projects with confidence. Turn to e-Builder, the leaders in Internet-based construction management. If you want your entire building team to communicate effectively, share resources and timelines, cut costs, and work together through standardized processes and documentation, rely on e-Builder. Our track record reflects a client-focused philosophy, complete accountability and a passion for innovation. While others only pretend to be big, e-Builder, as the industry pioneer, has always led the way. For more information on our clients and how e-Builder can enhance your construction projects with services such as TeamBuilder 5.0™, ConstructorCAM™, TeamSite™, e-Builder Neighborhood™ or e-Builder Desktop™, please contact us today.

e-Builder™
www.e-Builder.net

2424 North Federal Highway
Suite 316, Boca Raton, FL 33431
1-800-580-9322

© 2003 e-Builder, Inc. All rights reserved.

CIRCLE 47 ON INQUIRY CARD

Digital Architect

New tools connect buildings and sites

By Jerry Laiserin, FAIA

Every serious student of the history of architecture and urban design knows about the Nolli map, considered one of the masterpieces of urban cartography. Prepared under the supervision of Giovanni Battista Nolli in 1748, the map provided a detailed view of Rome on one sheet, combining geographic features, landscape elements, streets, buildings, public and private outdoor spaces, and even major interior public spaces such as St. Peter's and the Pantheon. The integration of geography and architecture, public and private, and urban and building scales made the Nolli map a unique descriptive and analytic tool. It remains valuable today for the insight it affords into 18th-century Rome, its architectural and urban forms, and their relationship to the landscape in which they were built.

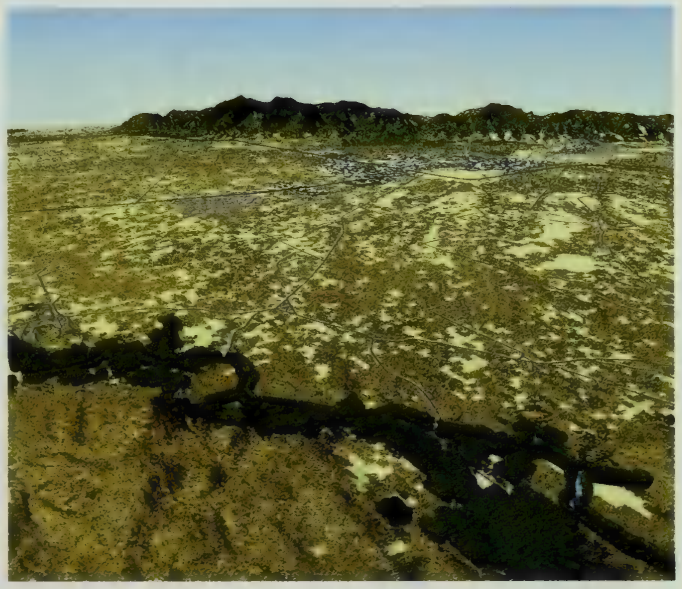
It may come as a surprise, then, to learn that the spatial integration achieved by Nolli and his team of surveyors with purely manual means 250 years ago cannot easily be duplicated by current computer technology. For a variety of technical reasons, computer software that works at the scale of individual building does not handle urban and regional information very well, while computer programs that handle maps and spatially organized data can have difficulty even defining a building's footprint. However, progress in both camps over the last few years points to new, cross-discipline software hybrids that will enable architects, landscape architects, and urban and regional planners to share information and collaborate more effectively on a wide range of project types and design scales.

Contributing editor Jerry Laiserin, FAIA, provides strategic consulting services to architects.

Plans versus maps

CAD works well for describing the geometry of individual buildings and their immediate surroundings as vectors—mathematical descriptions of lines with specific starting points and angles—at full size (a scale of 1:1) and with several decimal places of precision. Geographical information systems (GIS), on the other hand, typically represent spatial data in thematic layers, such as political subdivisions, roads, and vegetation, with appropriate descriptive and quantitative attributes organized into a relational database ["Digital Architect," JANUARY 2000, page 149], all related to maps. Maps, when combined with the aerial photographs, satellite imagery, and global positioning system (GPS) data that supplement them, are stored by computers as raster images ("raster" refers to the array of dots visible on a TV screen when viewed up close).

Throughout most of their respective histories, CAD and GIS have not worked well together. Until recently, most CAD software lacked the database capability to link to GIS spatial data, and many CAD programs still have difficulty handling raster images, even as backgrounds. GIS programs, for their part, can be manipulated into accepting building footprints as polygons assigned to a "buildings" layer in the spatial database, but typically they cannot handle the vector-based 3-D geometry of a building or digital terrain.



Large-scale regional simulations combine extensive GIS data with development models to predict alternative scenarios of ecological and visual impact.

While all designers of buildings, sites, and urban/regional developments need software that crosses over between CAD and GIS, landscape architects may experience that need most acutely, according to Patrick M. Caughey, ASLA, president of Wimmer Yamada and Caughey, a landscape and environmental planning firm in San Diego. Caughey, who also serves as a vice president of the American Society of Landscape Architects (ASLA) in Washington, D.C., says, "Landscape architects typically work in teams with architects, civil engineers, or urban designers, so 90 percent of ASLA's 13,500 members have moved or are moving to a mix of CAD, GIS, GPS, Internet-based communication, and project collaboration." In his own firm, Caughey downloads municipal GIS data on environmentally sensitive areas of a development site, combines it with survey maps of existing conditions, and incorporates GPS locations of plant materials to be preserved on the site.

House and garden

Most architects have simpler site plans; they set the building on its site and design basic paving and grading. Several software tools have recently come on the market for this: TopoCAD, Autodesk Land Development Desktop, EaglePoint's LandCADD, VectorWorks LANDMARK, and others. For many architects with such needs, these products pose unfortunate trade-offs: One may be geared toward civil engineers; another toward larger-scale subdivision work; and yet others may be seen as too costly, too hard to use, or incompatible with the architect's CAD program. Among the easiest and most economical solutions is EasySite, an

AutoCAD-compatible add-on (see "Digital Product Reviews," page 179).

With EasySite, an architect simply imports survey and topographic maps in their regular raster format, and the software painlessly builds an accurate 3-D terrain model in AutoCAD vector format. The program includes extensive libraries of predefined road surfaces, curbings, ground cover, plants, trees, signage—even cars, street furniture, and road markings. An AutoCAD building model (or one imported from another CAD program via a standard file conversion) can be placed on-site by drawing a pad in the shape of the ground-floor plan at the desired spot on the site plan and setting the pad to the desired elevation. The same procedure works for multiple buildings on a large site.

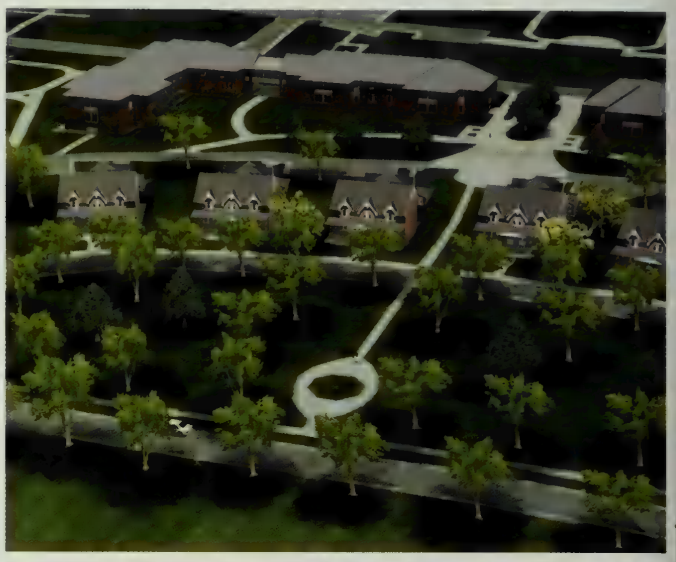


EasySite is a new tool that combines buildings in CAD with site information.

Sim city

From campus or neighborhood scale, up to full-blown urban design, the hottest software action is in urban and environmental simulation. "Urban sim" combines CAD and GIS but also adds fully rendered visualizations and animations, often offering users the possibility of navigating their own virtual tours through a simulated environment. Once the exclusive province of university-affiliated design labs, such as William Jepson's Urban Simulation Laboratory at UCLA or Michael Kwartler's Environmental Simulation Center in New York, "urban sim" is now within reach of many designers, via newly available commercial software. Among these tools are NavisWorks ["Digital Product Reviews," JUNE 2000, page 215], MultiGen-Paradigm Creator, and Evans & Sutherland's (E&S) RapidSite. The last two products emerged from their respective vendors' backgrounds in combat and flight simulators for defense/aerospace markets. By combining terrain modeling from GIS data, panoramic photographic backgrounds, and 3-D building models with digitally mapped ("pasted-on") photo-textures, these programs produce navigable views of complex environments. With a joystick or mouse, users can "walk" around, "drive" through, or "fly" over a proposed scheme, studying design impacts in ways never before possible.

For example, Architectural Design West, a 111-year-old firm with headquarters in Logan, Utah, recently designed new dormitories for 2,400 students, plus community facilities, integrated among the historic buildings of Fort Douglas on the University of Utah's main campus. To keep the new construction from visually overpowering the landmarked Carpenter Gothic officers' quarters on the base, the project required careful study of sightlines, building heights, and locations. The project was on a fast track as well, because the new dorms will house athletes for the 2002 Olympic Games in Salt Lake City. To avoid the prohibitive cost and lengthy delays that would have resulted from conventional CAD modeling of such a large and complex project, the architects turned to E&S' RapidSite. According to principal Anthony Wegener, RapidSite makes it possible to combine CAD models of new buildings with photo-mapped mass models of existing buildings on digital terrain derived from topographic maps and aerial photographs. The resulting simulation, which permitted self-guided walk-throughs, gave both the design team and the client confidence that the proposed scheme would work.



Here E&S RapidSite merges digital photo-textures, CAD models, GIS data, and aerial photography to create realistic scenes for users.

Alternative futures

At a regional scale, environmental simulation can be applied not just to the visual impact of single schemes but to the ecological impact of multiple development scenarios. For example, a cross-discipline, multi-organization team that includes the Harvard University Graduate School of Design (GSD), the University of Arizona, the Desert Research Institute (DRI), and U.S. Army CERL has been exploring the future of the San Pedro River Valley, which comprises 100 square miles straddling the states of Arizona in the U.S. and Sonora in Mexico. With an eye on sprawl radiating from Tucson toward one of the last free-flowing riparian desert rivers in North America, the team has been generating computer simulations looking 20 years out, based on scenarios that include: a free-market based model of real-estate development; a model that extrapolates from county master plans; and a conservation-oriented model. The simulations start by combining data from an ArcInfo GIS with a development-allocation model; future land-use patterns move to a groundwater modeling system at the University of Arizona, then on to biological models at DRI and back to GSD for visualization. Projected housing and other development objects are modeled in a Hollywood-strength visualization tool called Maya and placed on the GIS terrain via World Construction Set.

No design firm or private developer could marshal the resources for this level of analysis, with multiple simulations that assess everything from housing options to hydrological impacts, biodiversity indicators, and visual impact on the landscape. Yet, just as CAD and GIS tools themselves originally emerged from university-research environments into commercial availability, the capabilities of this newest and highest level of environmental simulation will someday filter down to the realm of everyday digital practice. ■

THROUGHOUT MOST OF THEIR RESPECTIVE HISTORIES, CAD AND GIS HAVE NOT WORKED WELL TOGETHER.

WWW *For a list of sources involved in connecting buildings and sites, go to* ***Digital Architect*** *at* ***www.architecturalrecord.com***

Put some virtuosity back into your designs.

Give your architectural designs the visual impact they need with ArchiCAD.



Virtual building modeled and rendered in ArchiCAD by Mr. Peter Bach and Mr. Peter Haddad.

It's a paintbrush on a blank canvas. A sharp chisel ready to cut stone. It's ArchiCAD software. The ultimate architect's tool. ArchiCAD's easy-to-use interface allows architects and designers to create, rather than draw, to build rather than draft. It offers cutting edge presentation features, automatic documentation, intelligent objects, and is fully compatible with AutoCAD. Graphisoft has been developing design solutions around the building simulation philosophy for 18 years.

We invite you to look at the standard in automated building simulation and documentation. It comes with a 30-day guarantee, and getting our CAD productivity kit on how to move from any software to ArchiCAD is as easy as calling **888.314.5042**. Or visit our website at **www.worksthewayyoudo.com.**

Here's what architects had to say about our software:

"Traditionally, you don't know if a project is a success until you walk in the building after the painters have left. ArchiCAD allows the client to look behind the curtain; they don't have to read the architect's mind."

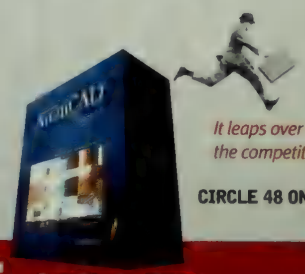
MICHAEL HRICAK, AIA, PARTNER,
ROCKEFELLER/HRICAK ARCHITECTS

"My customers have become accustomed to asking 'Can I see what this would look like?' They know I can make the change and show them the results right then, or e-mail it to them later."

MIKE OSTERMANN, OWNER,
OSTERMANN HOME DESIGN AND MILESTONE STUDIO

"ArchiCAD has given us a tremendous amount of power, and it has a short learning curve."

MALCOLM DEIGHTON, CO-OWNER,
DEIGHTON GIBBS ARCHITECTS



It leaps over the competition.

CIRCLE 48 ON INQUIRY CARD

GRAPHISOFT® ArchiCAD®

A PROJECT THIS AMAZING DEMANDS A SOFTWARE THIS INCREDIBLE



Bringing sixty creative minds together to design complex projects like Seuss Landing Retail Stores* requires the **ingenuity** and **experience** of AAD. Transforming 1680 monthly time records into knowledge that helps AAD better manage 375 projects a year requires the **power** and **integration** of the award-winning Wind2 Financial Management System. From real time project reporting and budgeting to fully integrated financial accounting, Wind2 provides AAD with the tools it needs to keep them on schedule and profitable in today's demanding design world.

*Seuss Landing Retail Facility
Universal Islands of Adventure, Orlando, FL
Photo: Michael Norton Photography

Wind2
Helping to Make it Possible

Designed for Microsoft Windows NT 98 | Designed for Microsoft Windows NT 95 | Microsoft OFFICE 97 Compatible

Named "Best Packaged Application" in Microsoft's 1998 Visual Fox Pro Excellence Award Competition.

Wind2

The Number One Provider of Project Accounting Software for the Professional Services Firm

Call 1.800.779.4632 today for a CD demo or visit us at www.wind2.com

CIRCLE 49 ON INQUIRY CARD

Digital Product Reviews

Tools in the field, at the desk, on the Net

By Jerry Laiserin, FAIA

Plan the work, work the plan

QuickGantt-Ballantine, Inc.

Figuring out and keeping track of which design or construction project tasks happen in which order is a far cry from the design skills that brought most practitioners into the architectural profession. Fortunately, a wide range of affordable computer software is available to handle every imaginable project-scheduling chore and work assignment. Unfortunately, as is often the case with computer solutions to business problems, most project-management software offers more functions, options, and formats than the typical architect needs or wants. Average architects in average firms usually need nothing more than the ability to do simple timeline schedules called GANTT charts.

QuickGantt delivers exactly what the name implies: quick GANTT charts. The core of the program is a single spreadsheet-like screen for entering the names of activities in rows and the duration of activities in columns. Drag-and-drop editing makes it possible to link the beginning of one activity to the end of another and to reshuffle the order. QuickGantt includes a wide selection of fonts (for labels and notes), line styles, and colors, along with standard project-management symbols for events such as milestones.

The resulting charts can be automatically scaled to different presentation sizes, printed, faxed, E-mailed, or exported to other documents. This last capability is especially important for incorporating a planned work schedule into a business development proposal, one of the most common uses of GANTT charts by architects. (Another common use is to communicate the project timeline to clients and consultants.)

QuickGantt is capable of more than just stylish graphics. For example, it can consolidate multiple projects into one master schedule and can compare two versions of one project, such as budgeted time versus actual hours. However, architects seeking the simplest, easiest, and least expensive way to produce GANTT charts need look no further. Highly recommended.

System requirements: Pentium CPU, running Windows 95/98/2000/NT 4.0; 32MB RAM; CD-ROM; Ballantine, Inc. P.O.B. 805, Carlisle, MA 01741; 800/536-6677; www.tools-for-business.com

Physical graffiti

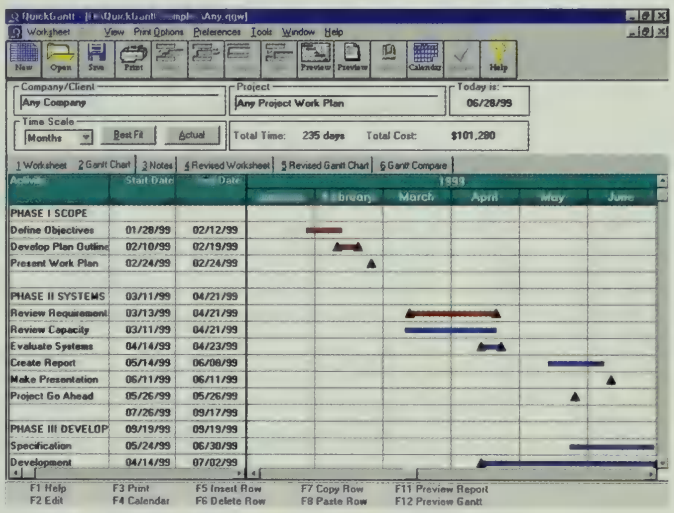
Mimio-Virtual Ink Corporation

Since the prehistoric cave-painting hunters at Lascaux, humans have planned their next moves by writing on walls. Even now, communication at business meetings often revolves around a whiteboard or flip chart, on which meeting participants can make notes and sketches, share ideas, get feedback, revise concepts, build consensus, and move the job forward. While there is much value in this graffiti, it is too often transient—easily erased, overwritten, or discarded. Recent technological advances, such as digital whiteboards that electronically capture and record marker strokes, may solve part of the problem, but only for a few fixed locations (boardrooms and the like) where their relatively high cost can be justified.

What if the ultrasonic and infrared sensing component of a digital whiteboard could be detached and made light enough to be carried around and secured to any whiteboard or flip chart? And what if this portable, graffiti-grabbing hardware could be linked to software that not only captured scribblings but allowed them to be edited, printed, published on the Web, or dragged and dropped into any other Windows or Macintosh software program? The result would be very much like Mimio, a suction-cup-equipped device that looks like a castoff from a high-tech glazier's toolbox.

Stick the battery-operated Mimio on any whiteboard or flip chart, connect the supplied cable to any PC or Mac, and start recording or Web-publishing every note and sketch, whether for future reference or concurrent viewing across the hall or around the world. At last, a computer technology that takes what people already know how to do easily and naturally, and makes it smarter and more useful without getting in the way. Significantly beyond cool.

System requirements: Windows or Macintosh PC; Virtual Ink Corporation, 56 Roland Street, Boston, MA 02120; 888/284-4092; www.mimio.com



QuickGantt

Working the land

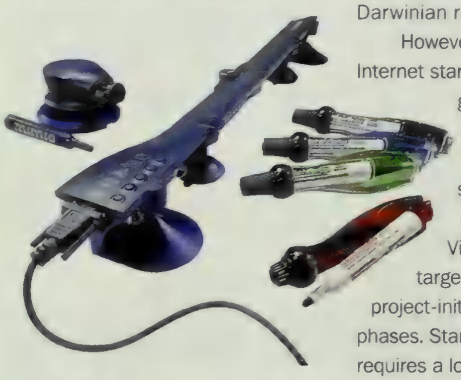
EasySite2.0-Cad Easy Corporation

For all the wonders of CAD in designing, documenting, and modeling buildings, it is surprisingly difficult to create 3-D site models in which to set those CAD buildings. The ways in which computers store and manipulate building descriptions tend to be mutually incompatible with the representation of maps, surveys, and topographic data (see "Digital Architect," page 175). Although software tools do exist to solve this problem, many of them are per-

Contributing editor Jerry Laiserin, FAIA, provides strategic consulting services to architects and their technology providers.

ceived as too expensive or too difficult to use.

EasySite addresses these issues through an affordable combination of three easy functions: creating 3-D terrain models from survey/topographic data, inserting CAD building models at the correct location and elevation on the digital terrain, and rendering the result with a variety of road designs, sidewalks, parking, vegetation, and the like. The beauty of the resulting site



The Mimio

models is more than skin-deep because EasySite is based on a civil engineering package called EasySurf (the software developers took out all the cut and fill, drainage calculations, inverts, and similar engineering features but kept the mathematical accuracy of land forms and the software "awareness" of road geometry and the like). Whether for a single-family house or a commercial office park, any building project with a site can benefit from EasySite.

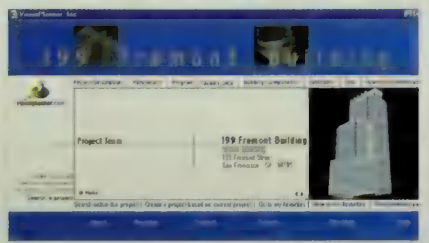
System requirements: AutoCAD (r14 or higher) and any AutoCAD-capable Windows PC; Cad Easy Corporation, 5187 SE Drake Road, Hillsboro, OR 97123; 800/627-3279; www.cadeasy. com

All's well that begins well
VisionPlanner-VisionPlanner.com

At the recent peak of dot-com mania, literally hundreds of companies promised to revolutionize design and construction by consolidating all project drawings, memos, submittals, requests for information, and so forth in centrally accessible sites on the Internet. Many of these project Web site or extranet services evolved from shaky assumptions about the building business, or simple "me too" marketing hype, and the financial markets have rendered most of them extinct with Darwinian ruthlessness.

However, a few of these Internet start-ups offer features genuinely useful to architects and clients, and they are likely to survive and flourish. One of the brightest is VisionPlanner.com, which targets the otherwise ignored project-initiation and closeout phases. Starting a new project requires a lot of information about scope, budget, project team, and so on. One of the best sources of such information is the history of prior, similar projects. VisionPlanner closes this information loop by helping to build and index a database of information from closed-out projects and then recirculating it as guidance for planning new projects.

Large firms with many in-house projects can acquire and run the VisionPlanner software internally, but most architects will opt for the hosted-service version. Users may choose to keep their project histories private, or they can share anonymously (instead of planning the next hospital project based on the last two in my firm, I could use



Vision Planner's Digital Address



An image drawn in EasySite 2.0

data derived from 200 hospitals in VisionPlanner's Internet database). All the screens that users see represent clear, simple forms that can be filled out in a straightforward, logical manner. If enough people use the database and create a "critical mass" of project data, VisionPlanner will be among the few dot-coms to live up to its revolutionary reputation.

System requirements: Internet connection; Web browser; Vision Planner, 1875 Charleston Road, Mountain View, CA 94043; 650/316-3783; www.visionplanner.com

Searchin' every which way
DrawingSearcher-Docu-Point

As the information revolution progresses, more and more architects are turning to Internet and Web technologies to promote their work (via Internet Web sites), to coordinate their work internally (via intranets), and to share their work with clients, consultants, and contractors (via extranets). Much of what architects wish to publish or post to these various nets consists of CAD files, which are notoriously difficult to integrate with Internet/Web technology. CAD files must be modified from their native format (such as DWG, for AutoCAD) in order to be visible on the Internet, and then posted—multiple steps that impede widespread use of CAD on the Web.

Furthermore, CAD files cannot easily be searched for specific content, making the right file difficult to find after a group has been posted. DrawingSearcher addresses all of these problems, at least for AutoCAD files. A batch utility called Whip-n-Post converts user-selected groups of regular AutoCAD DWG files to Autodesk's Whip! Internet format (also called DWF) and automatically posts them to prespecified Web locations. Any standard Web browser suffices to view the published files via a DWF plug-in, such as the free version of Autodesk's Volo viewer that ships with AutoCAD. A search tool, based on AltaVista full-text Web search technology, automatically indexes the contents and can search on all text blocks, such as notes and labels, inside AutoCAD files, as well as in attached text attributes of AutoCAD drawing entities. For example, an architect could search for all instances of the term "pressure-treated lumber" in a drawing, a set, or an entire office library of AutoCAD drawings. DrawingSearcher can also be configured to search for and extract copies of title block information, so that project data can be linked to transmittals, accounting information, and so on.

Any AutoCAD user with a substantial number of AutoCAD DWG files to be Web-converted, posted/published, and subsequently searched via internal or external Internet means—whether on a one-time or recurring basis—should search out DrawingSearcher.

System requirements: AutoCAD, Internet server; Docu-Point, 573 Maude Court, Sunnyvale, CA 94086; 408/523-1815; www.docu-point.com.

WWW *For more digital product reviews, go to* ***Digital Architect*** *at* ***www.architecturalrecord.com***



Spark ideas with Viecon.com

Introducing Viecon.com by Bentley. The only project extranet that brings building professionals together. Giving them the ability to store, share and synchronize models, drawings, specs, photographs, animations, sound and more. Providing a catalyst for communication, collaboration and imagination. And hastening multi-tasking, productivity and profitability. So harness the power of Viecon and harness everyone's best thinking. All with the assurance of Bentley's commitment to superior technology. Viecon.com. Work together.

viecon.com
by Bentley

©2000 Bentley Systems, Incorporated. Bentley is a registered trademark and Viecon is a trademark of Bentley Systems, Incorporated or Bentley Software, Inc. BAA006950-1/0001

CIRCLE 50 ON INQUIRY CARD

Product Reports 2000



The year 2000 has come and gone, and not much has changed in the product design industry, or has it? Keeping up with demand this year was most likely the top priority for most building product manufacturers, but that didn't stop them from turning out a number of well-designed and functional products. This year manufacturers also invested more time and money into improving their Web sites, turning them into service and sample-ordering centers instead of merely electronic advertisements, a trend that is sure to continue.

Popular materials for exterior and interior products included exotic woods (from managed forests, of course), glass, and stainless steel, with translucency remaining a major trend. The strongest product introductions this year came from the bathroom and kitchen manufacturers, and these products received the best reader response as well. Gaggenau USA stainless-steel appliances; Ann Sacks glass tiles; bathroom offerings from Hoesch, Duravit, and Dornbracht; and sculptural sinks, such as the X-basin from Infinite Fitting, all added high-design options to the bathroom and kitchen categories.

Building product manufacturers headed in new directions this year by boldly entering into new businesses, another trend that will most likely continue. For example, DuPont Corian has launched IntegriS, an integrated project-management offering that provides one-stop shopping for commercial products and

Cast Your Vote for the Product Reports 2000 Product of the Year

The "too close to call" results of this year's Presidential election should inspire you to vote for your favorite Product Reports 2000 product on our Web site during the month of December. The poll will offer a choice of one product from each category on the following pages from which readers can select the final "Product of the Year." The results will be updated each time a vote is cast, so you can check on the status of your pick, but visitors can only vote once (unlike voters in Palm Beach County, Fla.). If you forgot to vote in November, make up for it now. Be sure to check out the Product Reports 2000 poll the next time you visit us at www.architecturalrecord.com.

installation services for new construction and renovation projects. Other manufacturers are going retail: Turnstone, a Steelcase Company, has a new store on the first floor of Chicago's Merchandise Mart, and Herman Miller, which began offering "fast furniture" exclusively via the Internet for small and emerging companies, expects to open a retail showroom in New York for the product line. Steelcase has entered the real-estate business and, through a venture with Gale & Wentworth, has created Workstage, a new company that will design, construct, and maintain office buildings.

In September, a jury of product experts reviewed over 600 submissions to find well-designed products that propose an answer to a problem faced by architects and designers. Products that generated the best response from the jury offered something a little extra—whether it was energy efficiency, cost savings, or a custom look with all the benefits of a standard product, such as a pre-engineered modular balcony system.

Below are a few of the products that really stood out for me during the course of the year. I hope that in reviewing this list and the products selected by our jury on the following pages (there are a few duplicates), you will find something—whether it's ergonomic seating or emergency lighting—that helps you in your quest for the perfect product solution. Rita F. Catinella

Editor's Picks for 2000

1. Enameled-steel refrigerator,* Sonrisa [MARCH, page 196]
2. TableBed, Inova (see Furnishings)
3. Lucy Chair,* Vecta (see Furnishings)
4. Sky Glass & textured, solid-surface formulations, Avonite [MAY, page 368]
5. Color-changing paint, Surface Protection Industries [SEPT., page 200]
6. Imago hard-surface textile, Knoll Textiles [SEPT., page 200]
7. Microsphere ergonomic workstation, Microsphere [SEPT., page 203]
8. Carpet tile from a renewable, natural resource derived from corn,* Interface (see Finishes)
9. Pod Ens indoor/outdoor lamps,* Luceplan [MAY, page 355]
10. Anodized aluminum-panel system, Alutile [AUGUST, page 223]

*Shown on opposite page.

185 **General Data**
189 **Site Work**
191 **Concrete & Masonry**
193 **Metals, Wood & Plastics**
195 **Thermal & Moisture**
197 **Doors & Windows**
203 **Finishes**
213 **Specialties**
215 **Equipment**
217 **Furnishings**
223 **Special Construction & Conveying Systems**
227 **Mechanical**
231 **Electrical**



The Product Reports 2000 Jury

David W Epstein, AIA (seated, right), is a design director in Gensler's Washington, D.C., office. Since joining the firm, he has completed the design of three speculative office buildings in northern Virginia and the conceptual design of One Light Street, a 44-story tower in Baltimore. While at SOM, Epstein designed the award-winning Gas Company Tower in Los Angeles, the Fubon Bank Tower in Taipei, and the Tipco Headquarters in Bangkok.

John Amatruda, RA (seated, left), is a senior architect and associate with Steven Winter Associates in Norwalk, Conn. He specializes in environmentally conscious design and the evaluation of "green" materials and systems. Amatruda has worked as an environmental consultant on numerous commercial and residential projects nationwide. He is the author of the "Environmentally Preferable Material Selection Guidelines" for the U.S. Navy and was a technical consultant for New York City's "High Performance Building Guidelines."

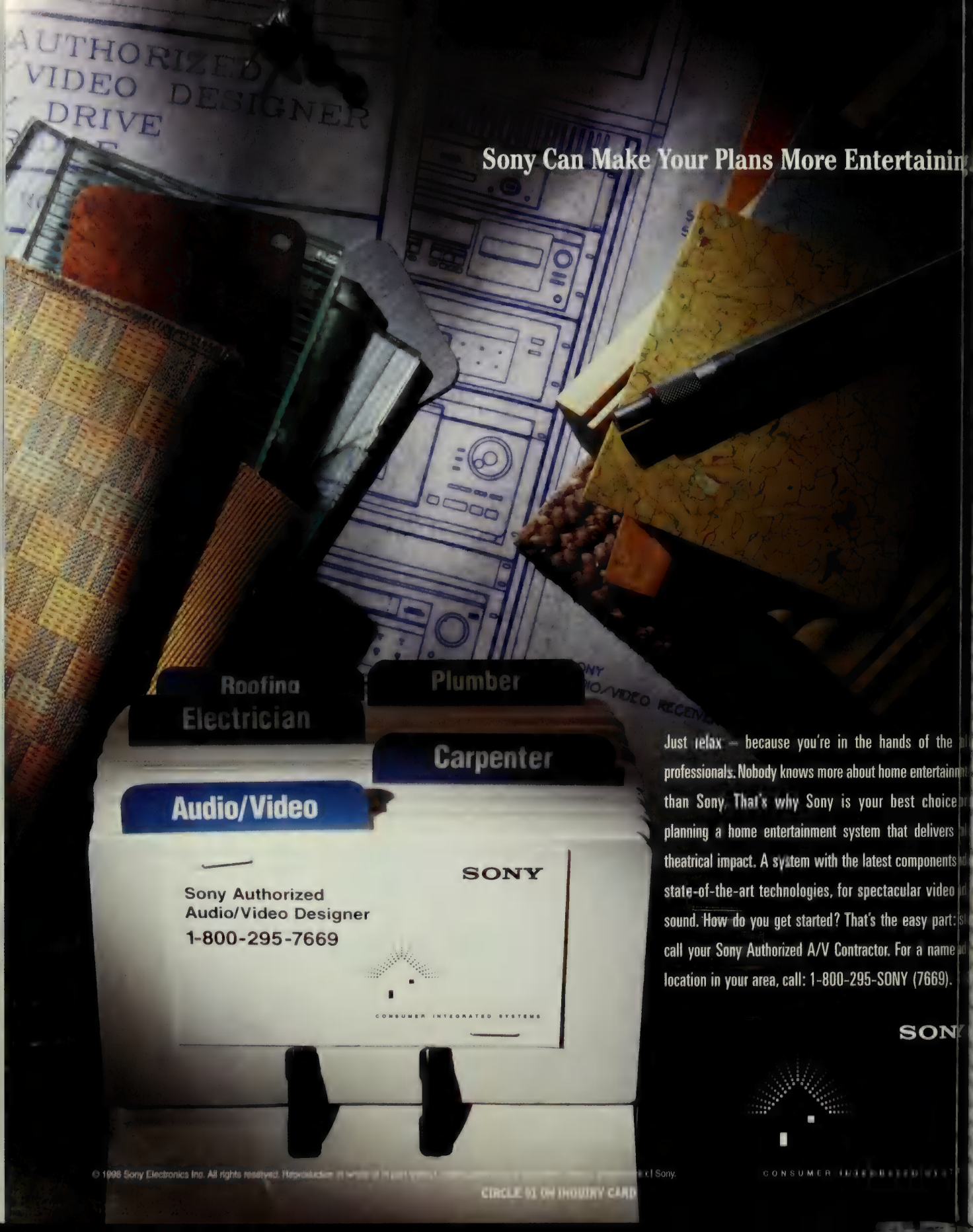
Craig Konyk, AIA (standing, right), formed Konyk, his Brooklyn-based firm, in 1989 as an interdisciplinary architecture design studio. He is a recipient of a New York Foundation for the Arts Fellowship in 1994 and 1998, and AIA New York Chapter Design Awards in 1994, 1995, and 1996. He was awarded a grant in 1997 from the New York State Council for the Arts for "An Architecture of Accommodation," a study of strategies to alleviate existing overcrowding in New York City public schools.

Terese Wilson (standing, left) is a principal at Lehman-Smith+McLeish, an interior architectural design and strategic planning firm with headquarters in Washington, D.C. Wilson is an award-winning interior and product designer with an extensive portfolio range of projects for Fortune 500 companies. As a product designer she has worked on the design of a line of Martin Brattrud lounge furniture and the Lehman-Smith+McLeish end table.

Katherine Sutton (seated, center) has worked in all facets of the A&D industry—as dealer salesperson, manufacturer's rep, design specifier, resource librarian, and product editor. She is chair of the New York chapter of the Resource Director's Association, an organization of materials specialists working at architectural and interior-design firms. Sutton currently consults as a materials specialist with the architectural firms of Beyer Blinder Belle and Page Ayres Cowley Architects in New York.

The following RECORD editors assisted in the judging: Rita F. Catinella, Charles Linn, AIA, and Contributing Editor Jerry Laiserin, FAIA, who is also a technology consultant and lecturer.

ALL PHOTOGRAPHY BY JON T. GRAY © STONE SOUNDOUR



Sony Can Make Your Plans More Entertainin

Just relax — because you're in the hands of the professionals. Nobody knows more about home entertainment than Sony. That's why Sony is your best choice for planning a home entertainment system that delivers theatrical impact. A system with the latest components and state-of-the-art technologies, for spectacular video and sound. How do you get started? That's the easy part: just call your Sony Authorized A/V Contractor. For a name and location in your area, call: 1-800-295-SONY (7669).

SONY

CONSUMER INTEGRATED SYSTEMS

© 1996 Sony Electronics Inc. All rights reserved. Reproduction in whole or in part without written permission of Sony.

CIRCLE 91 ON INQUIRY CARD

GENERAL DATA

Computer software • Computer systems • Design office equipment & materials • Electronic literature



VISIONPLANNER IS A BREAKTHROUGH OFFERING THAT BRINGS THE POWER OF THE INTERNET TO BEAR ON THE EARLIEST PREDESIGN PHASE OF PROJECTS. —*Jerry Laiserin, FAIA*

CAD in the palm of your hand

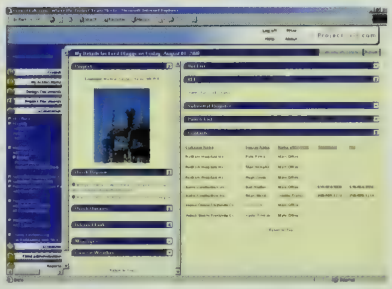
Autodesk introduces OnSite View, the first software for viewing design drawings on mobile devices. Using OnSite View, architects, engineers, and construction managers can view and mark up complex design drawings while on job sites. 800/964-6432. Autodesk, San Rafael, Calif. **CIRCLE 200**



200

Web project management

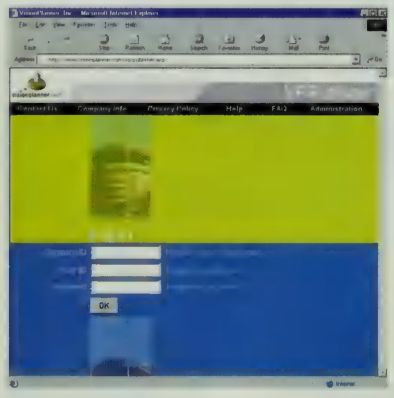
ProjectTalk.com, a new online project-management community, gives AEC professionals the option of managing the lifecycle of projects over the Internet on a subscription basis. 916/641-3080. Meridian Project Systems, Sacramento. **CIRCLE 201**



201

Pre-development solution

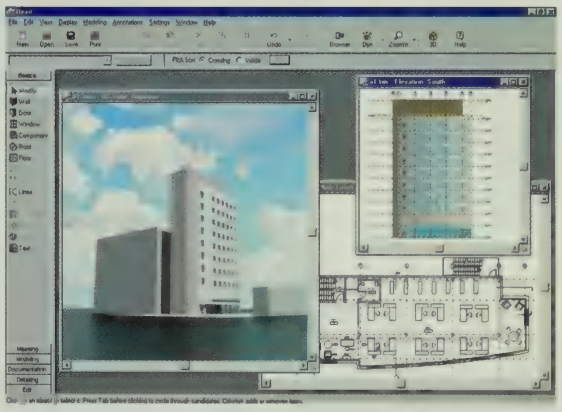
VisionPlanner streamlines the pre-development stage of projects and up-front analysis, leveraging technology to organize projects, make information easily accessible, and source-match needs. 650/316-3712. VisionPlanner.com, Mountain View, Calif. **CIRCLE 202**



202

Seeing it through

Revit 2.0, the only integrated CAD system that supports the design and documentation process from parametric massing studies through parametric detailing, presents a new way of using, integrating, and owning software. 781/839-5300. Revit, Waltham, Mass. **CIRCLE 203**



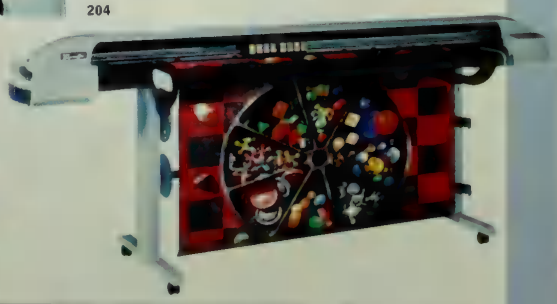
203

Versatile printers

CADJet 3-D offers technical designers the flexibility of printing crisp, 2-D line drawings or complex, 3-D renderings, as well as mapping images with brilliant color. It can print a two-by-three-foot full-color plot in 100 seconds. The NovaJet 850 can switch from indoor graphics to archival photos to outdoors signs at the touch of a button. 858/452-0882. ENCAD, San Diego. **CIRCLE 204**



204



GENERAL DATA

Computer software • Computer systems • Design office equipment & materials

So simple

Vectorworks, the former MiniCad, increases the product's architectural capabilities in an easy-to-use setup. Given its high functionality, Vectorworks is relatively inexpensive. 410/290-5114. Diehl Graphsoft, Columbia, Md. **CIRCLE 205**

Space conservation

IBM's sleek black NetVista consumes 75 percent less disk space than the typical PC. Features include local-area-network connections, universal serial bus ports, generous hard-disk drives, and random access memory. 800/426-7255. IBM, White Plains, N.Y. **CIRCLE 206**

Share and share alike

EZ, from Sigma Design International, allows users to share files on the Internet without a Web browser or a centralized Web server. Users may also view and mark up any file without having the software that created it. 888/990-0900. Sigma Design International, Alexandria, La. **CIRCLE 207**

Changing dimensions

Bricsnet Architecturals 2.0 enables AutoCAD users to migrate from a traditional 2-D-oriented workflow to a 3-D building design approach and maintain compatibility with their data and applications. 781/756-6300. Bricsnet, Wakefield, Mass. **CIRCLE 208**

Computer-based catalog

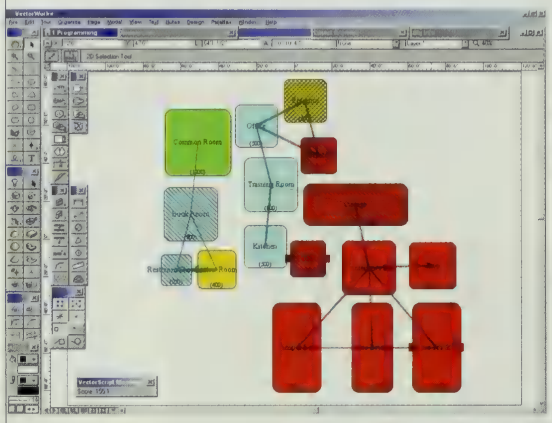
Vetter Windows and Patio Doors' new Architectural Resource CD, available at no charge within the industry, introduces the latest product drawings, specifications, and performance information for Vetter products. 800/VETTER-2. Vetter, Mosinee, Wis. **CIRCLE 209**

Quite a display

ViewSonic VP181 features a liquid crystal display to reduce distortion, connections for the latest multimedia technologies, and an 18.1-inch viewable display. 800/888-8583. ViewSonic, Walnut, Calif. **CIRCLE 210**

Hotlinking for ArchiCAD

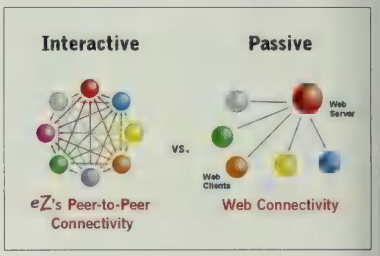
ArchiCAD adds to its 3-D CAD program a new drawing-management capability for reference files, called hotlinking. Users can switch easily from 2-D to 3-D work modes. 415/703-9777. Graphisoft, San Francisco. **CIRCLE 211**



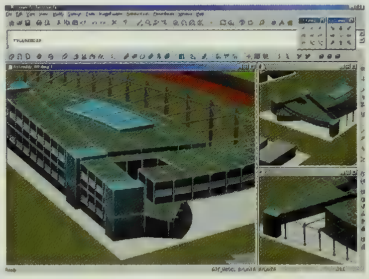
205



206



207



208



209



210



211

Back to the drawing board

The latest DataCAD Plus software is offered in the DataCAD Plus Drawing Board Edition, packaged with the power of a drawing pad, the WacomPL400 LCD Pen Tablet. 800/667-4004. DataCAD LLC, Avon, Conn. **CIRCLE 212**

Virtual carpet

Lees introduces the Accelerated Design System (ADS), a simulation program that produces a digital image of custom carpet products within 24 to 48 hours, rather than the timely process of making an actual carpet sample after each design adjustment. 800/523-5647. Lees, Greensboro, N.C. **CIRCLE 213**

Codes un-encrypted

BOCA's Electronic Library adds the *2000 International Fire, Mechanical, Energy Conservation, and Property Maintenance Codes* to create a 22-code CD, which includes convenient features such as printing code text and searching. 800/214-4321, ext. 371. BOCA International, Inc., Country Club Hills, Ill. **CIRCLE 214**

Interactive industry

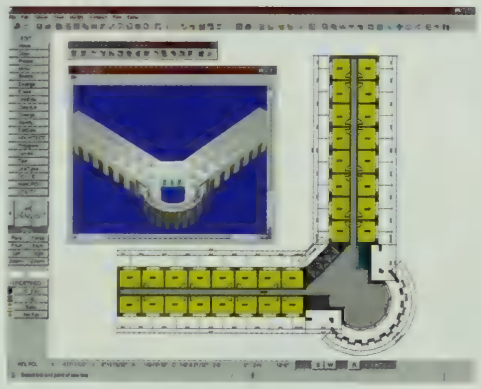
Architectural Doors and Hardware Fundamentals Self-Study Course, a three-disk CD-ROM program, uses a multimedia approach to introduce the product and application side of the door and hardware industry. 703/222-2010. Door and Hardware Institute, Chantilly, Va. **CIRCLE 215**

Structural selection

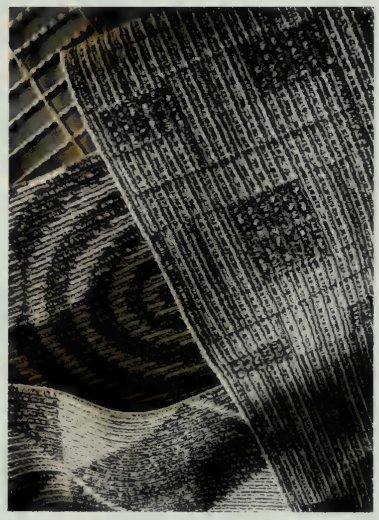
Using an intuitive graphic navigation interface, the ConSept Pro CD-ROM Version 2.0 is designed to help construction professionals evaluate and select a structural system. The program includes features such as product metrication and design tables based on U.S. and Canadian codes. 847/517-1200. Concrete Reinforcing Steel Institute, Schaumburg, Ill. **CIRCLE 216**

Telecommunications narrative

Through a narrated tour of actual installations, the *Introduction to Commercial Voice/Data Cabling Systems* video and accompanying guidebook provide an accessible resource for non-telecommunication professionals. 800/242-7405. BICSI, Tampa. **CIRCLE 217**



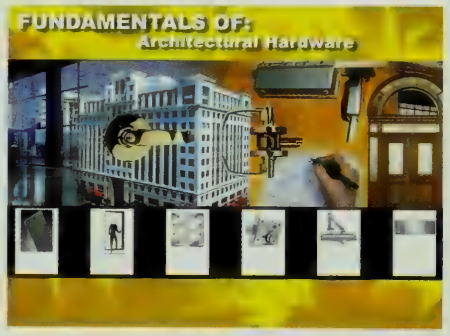
212



213



214



215



216



217

Solitaire™







KIM LIGHTIN

16555 East Gale Ave
City of Industry, CA 91
626/968-56

CIRCLE 52 ON INQUIRY CA

www.kimlighting.c



SITEWORK

Earth retainage • Landscape accessories • Paving specialities • Site, street & mall furnishings



I AM DRAWN TO SIMPLE, ELEGANT SOLUTIONS IN THE LANDSCAPE CATEGORY. FORMS AND SURFACES SEEMS TO REALLY CARE ABOUT ITS PRODUCTS. —*David W. Epstein, AIA*

Urban renewal

Designed by Hardy Holzman Pfeiffer Assoc. for the Cityscape Institute, the Urban Renaissance Receptacle combines street-smart durability and ergonomic functionality with a grillwork enclosure that can be customized to meet a city's specific aesthetic needs. 877/929-0011. Siteform+, Carpinteria, Calif. CIRCLE 218

Plant network

DecorCable Innovations introduces the Jakob Inox Line Greensystem. Specifically designed for vertical plantscapes and other outdoor greening projects, these wire ropes and connectors are available in multiple styles. 800/444-6271. Jakob Inox Line, Chicago. CIRCLE 219

Garden refuge

The Arbor Bench, by Country Casual, features a contoured seat framed by panels of teak trellis. Unadorned or covered with foliage, this bench is suitable for residential or commercial applications. 800/284-8325. Country Casual, Gaithersburg, Md. CIRCLE 220

Coordinated receptacles

The Universal Receptacle, designed for indoor or outdoor use, offers a matrix of different size and style combinations. The receptacles are made of stainless steel and aluminum with powdercoat covering available. 877/929-0011. Siteform+, Carpinteria, Calif. CIRCLE 221

Modular bench

Originally conceived as stadium seating, architect Enric Miralles' design for the Vacante Bench has been translated into a standardized system of seating. Available in perforated steel with powdercoat finish or formed wood. 877/929-0011. Siteform+, Carpinteria, Calif. CIRCLE 222

Border line

Permaloc's AsphaltEdge is an aluminum L-shaped asphalt enclosure that delineates a clean edge during asphalt installation. 800/356-9660. Permaloc Aluminum Edging, Holland, Mich. CIRCLE 223



218



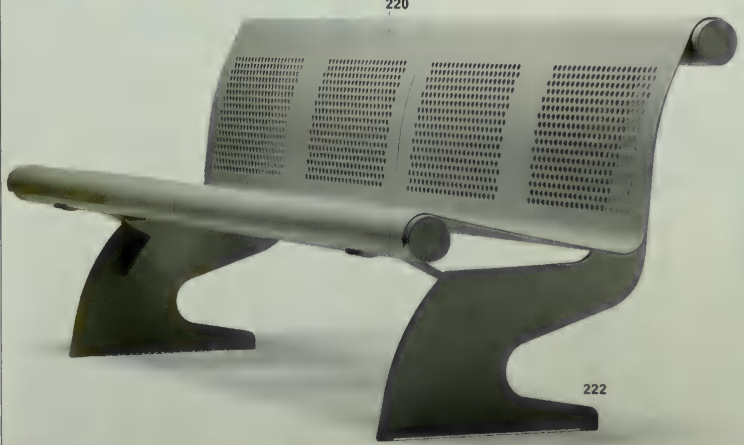
219



220



221



222



223

Is it *MAGIC* or *IMAGINATION*



LEHIGH

Since 1897

7660 Imperial Way, Allentown, PA 18195

800-523-5488 610-366-4600 Fax: 610-366-4638

www.lehighcement.com

CIRCLE 53 ON INQUIRY CARD

CONTINUING EDUCATION AIA

CONVENTIO EXPO DENVE

Visit us at Booth at AIA Expo 2

CONCRETE & MASONRY

Concrete materials • Concrete formwork • Formliners • Concrete restoration and cleaning • Masonry units



I AM LOOKING FOR PRODUCTS THAT PUSH THE LIMITS OF CONCRETE AND IN NO WAY TRY TO MAKE IT LOOK LIKE SOMETHING IT IS NOT. —*David W. Epstein, AIA*

Stone and masonry cleaner
D/2 Architectural Microbial is a biodegradable liquid that removes biological deposits from hard environmental surfaces. A contact time of only two minutes, followed by manual scrubbing, will loosen and remove most biological growth, which contributes significantly to the degradation of stone and masonry. 800/684-0901. Cathedral Stone Products Inc., Hanover, Md. CIRCLE 224

Block drainage system
Mortar Net Block's efficient management of moisture migration helps prevent efflorescence on interior and exterior concrete masonry. The product is made of 100 percent recycled polyester. 800/664-6638. Mortar Net USA, Ltd., Gary, Ind. CIRCLE 225

Precast modular system
Oldcastle precast concrete modules can be used to quickly create classrooms, correction facilities, pump stations, toll booths, or other facilities. 215/257-8081. Oldcastle Precast Modular Group, Telford, Pa. CIRCLE 226

Not just for sidewalks anymore
Buddy Rhodes Studio creates precast concrete for floors, walls, bar tops, counters, benches, sinks, tubs, showers, and columns. As in the Italian terrazzo tradition, the surface is ground with water to expose the natural aggregate. The three surface finishes are veined, steel trowel, and terrazzo. 877/706-5303. Buddy Rhodes Studio, San Francisco. CIRCLE 227

Adjustable corner form unit
The Arxx four-inch adjustable corner form unit (top) will eliminate the need to miter-cut non-90-degree corners on four-inch Arxx Wallsystems. The eight-inch extended brick ledge form unit (bottom) makes it easier for Arxx Wallsystems to be used in applications requiring a brick or stone veneer on an eight-inch structural concrete wall. 800/293-3210. Arxx Building Products, Cobourg, Ontario. CIRCLE 228





224

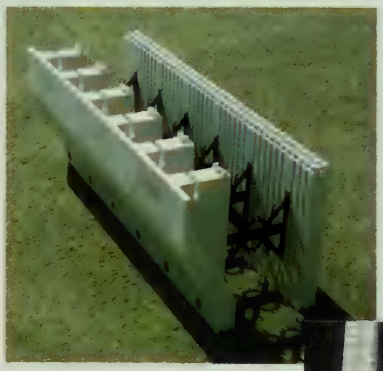




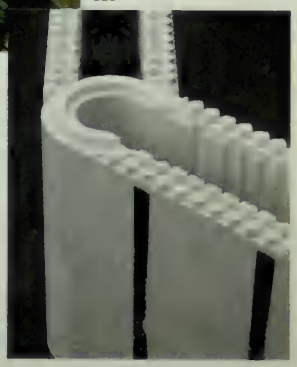
225



226



228





227

OUR CERTIFICATION EXAM CAN MAKE EIGHT WEEK

OF BOOT CAMP SEEM LIKE A SUMMER VACATION



Each year, every Metal Building Manufactu
Association (MBMA) member must pass a thor
engineering and manufacturing audit that com
a written submission and on-site inspections b
independent consulting engineer.

Here's the drill. AISC auditors annually scruti
order entry, purchasing, fabrication, and de
and detail documents randomly selected fro
list of 200 projects over the past six month
In addition, they give the white glove treatm
to our manufacturers' inner workings, from rec
to welding quality to shipping.

MBMA members also invest millions of dol
in research to advance the performance
metal buildings in extreme conditions.

No other industry group matches our memb
dedication to bringing archit
quality, flexible and depend
metal building and roofing sys
To find out more about specif
metal buildings systems or our CEU progra
call or visit our web site today.

Recruits only go through boot camp once
Your metal buildings manufacturer has marc
orders to take the exam every year.

MBMA
BUILDING MANUFACTURERS ASSOCIATION

CIRCLE 54 ON INQUIRY CARD

(216) 241-7333

www.mbma.com

METALS, WOOD & PLASTICS

Railings and handrails • Metal coatings • Architectural metalwork • Wood treatments • Prefabricated structural wood • Laminates



ABET LAMINATI CONTINUES TO DELIGHT ME WITH ITS INNOVATIVE DESIGNS. —*Katherine Sutton*

Wherefore art thou Romeo?

The Balcon-ease is a pre-engineered modular balcony system. Features include a variety of rail styles, sizes, and a sure-grip checker plate deck. Bolted connections eliminate field welding. 303/296-6070. The Urban Habitat, Denver. CIRCLE 229

Gray-colored copper

FreedomGray, the tin/zinc alloy–coated copper from Revere, offers the advantages of copper in an earth-tone gray color. It is lead-free, environmentally friendly, and designed to withstand years of corrosive weathering. 800/950-1776. Revere Copper Products, Rome, N.Y. CIRCLE 230

Stainless-steel railing

Guardrails and handrails in the inox pre-engineered railing system feature brushed-finish, high-quality steel for interior and exterior applications. 877/HEWI-INC. Hewi, Inc., Lancaster, Pa. CIRCLE 231

Thicker MDF panel

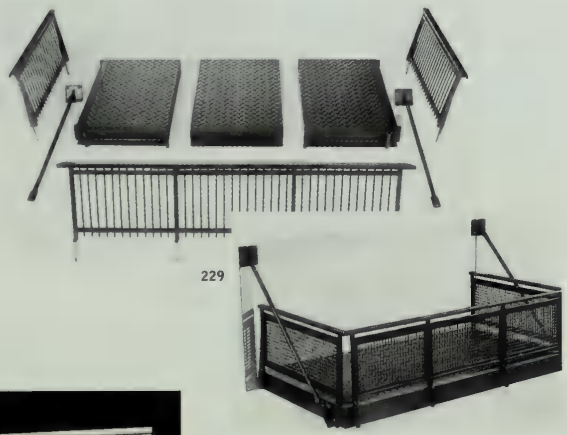
Made from 100 percent Southern pine fiber, two-inch Premier Plus MDF has the same characteristics as Willamette's thinner Premier Plus MDF. The smoother, more machinable board is available in four- and five-foot widths, and in lengths up to 18 feet. 803/802-8055. Willamette Industries Inc., Fort Mill, S.C. CIRCLE 232

Greater choice in joists

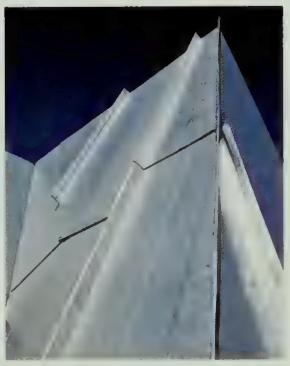
The new version of the TJI joist features flanges made from TimberStrand Laminated strand lumber. 800/338-0515. Trus Joist, A Weyerhaeuser Business, Boise, Idaho. CIRCLE 233

Glam laminates

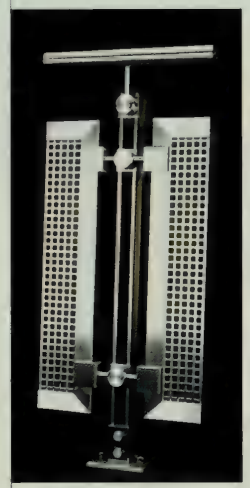
Iridescenti, Serigrafia 2000, and Cresp are three new laminates from Abet Laminati. Iridescenti laminates shimmer in 21 colors and two finishes (soft and bumpy); Serigrafia 2000's bright colors are made possible by special silk-screening techniques; and Cresp has a crinkled texture with a highlighted raised effect. 800/228-2238. Abet Laminati, Englewood, N.J. CIRCLE 234



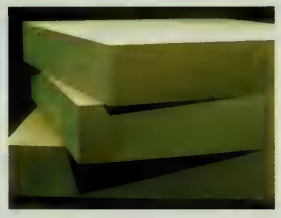
229



230



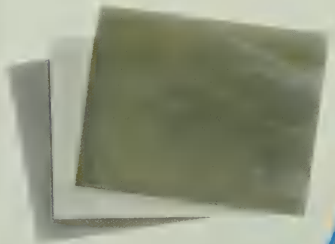
231

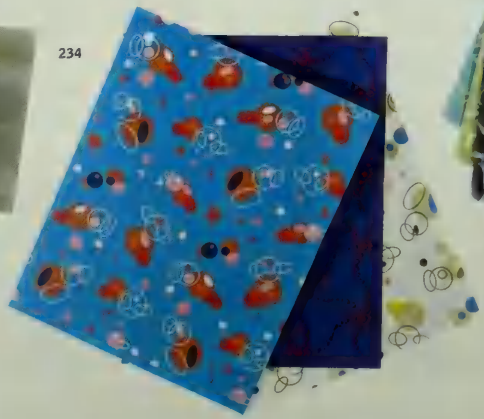


232



233





234



Pinehurst Resort & Country Club
Centennial Course No. 8
Owner: Club Corporation of America
Architect: James R. McVicker Jr. AIA

Roofing Contractor: McRae Roofing Inc
Color: Hemlock Green
Profile: Snap-Clad.



*Not to mention the blues, reds and 30 other standard colors on steel. (18 on aluminum)

SNAP-CLAD™
Metal Roofing Panels

Pinehurst Resort & Country Club recently completed its new clubhouse for its Centennial Course No. 8. The clubhouse, designed by architect James R. McVicker, evokes the rich tradition of Pinehurst and its position at the top of a hill makes it visible from all corners of the course. The project features over 9,000 sq. ft. of Snap-Clad panels with a Hemlock Green PAC-CLAD finish. McRae Roofing Company of Asheboro, North Carolina installed the panels.

Petersen Snap-Clad Panels are corrective leveled as they are roll-formed, allowing us to provide panels of unmatched flatness. PAC-CLAD is a full Kynar 500® finish covered by a non-prorated 20 year warranty. For complete information, please call us at **1-800-PAC-CLAD or visit our redesigned web site featuring new on line ordering @ http:// www.pac-clad.com.**

PAC-CLAD®
Petersen Aluminum

1005 Tonne Road, Elk Grove Village, Il 60007
1-800-PAC-CLAD ▪ FAX: 1-800-722-7150 or 1-847-956-7968

Other Plant Locations:
Annapolis Junction, MD: 1-800-344-1400 • Tyler, TX: 1-800-441-8661 • Kennesaw, GA: 1-800-272-4482

NEW **Order on line! Visit our site @ http://www.pac-clad.com**

CIRCLE 55 ON INQUIRY CARD

THERMAL & MOISTURE

Fireproofing • Insulation • Membrane roofing • Siding



> THE GROOVED, DIAMOND-PATTERN SURFACE [OF PARKLEX 1000] IMPLIES THAT THE PANELS COULD BE USED AS INDUSTRIAL FLOORING, WHICH INTERESTS ME. —*Craig Konyk, AIA*

Zinc cladding
Rheinzink's modular zinc wall panels utilize an advanced dry-seal, pressure-equalized, rainscreen technology. 604/291-8171. Rheinzink Canada Ltd., Burnaby, British Columbia. CIRCLE 235

Diamond-patterned wood
Parklex 1000 exterior-grade wood-composite panels are now available with a grooved, diamond-pattern surface. 310/396-9991. Finland Color Plywood Corporation, Venice, Calif. CIRCLE 236

Fire-resistant membrane
UltraGard SRT 45 Fire Resistant (FR) and SRT 60 FR are heat-weldable, single-ply membrane products that are mechanically attached or fully adhered. 800/654-3103. Johns Manville Roofing Systems Group, Denver. CIRCLE 237

HCFC-free polyiso
ACFoam is a line of environmentally friendly HCFC-free polyiso insulation products that retain high R-values and provide improved facer adhesion. 770/933-4479. Atlas Roofing Corp., Atlanta. CIRCLE 238

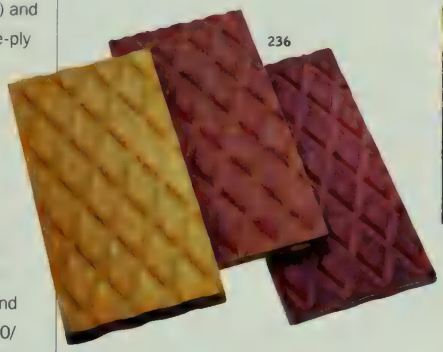
Ridge venting
The V-600 line features a radiused peak that keeps the ridge well defined and prevents shingle cracking during cold-weather installations. 800/837-8368. Cor-A-Vent Inc., Mishawaka, Ind. CIRCLE 239

Keep drier with fleece
Stevens EP Fleece membranes are available in black, white, and gray and come in both 80- and 95-mm thicknesses. The membrane combines a Stevens EP TPO membrane with a nonwoven polyester fleece. 800/621-ROOF. Stevens Roofing Systems, Holyoke, Mass. CIRCLE 240

Exterior trim
The TEC manufacturing process produces a wood-composite trim of uniform density that is easy to handle, cut, machine, and nail. 800/255-0785. Masonite Corporation, Chicago. CIRCLE 241



235



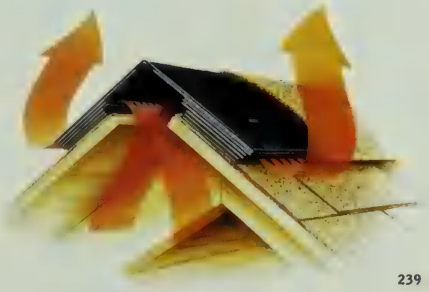
236



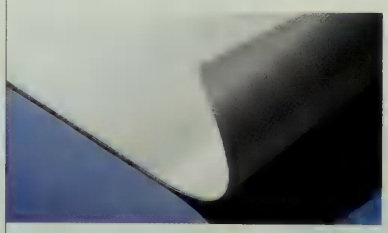
237



238



239



240



241

Building On Generations Of Experienc



We're committed to the future! At EAGLE Window & Door we continue to offer a rich heritage of superior craftsmanship. Many of our employees are second- or third- generation window crafters, and remain the strength and heart of our business. That's why we're reinvesting in our community by building a new, state-of-the-art manufacturing facility. From the oldest, continually-operated window and door facility in the country (circa 1860's) to the newest, EAGLE is dedicated to carrying on a long-standing tradition. Isn't it time you experience a legacy in the making!



EAGLE WINDOWS · DOORS

For information about EAGLE, call (800)453-3633 or visit our website at www.eaglewindow.com.

© 2000 EAGLE Window & Door, Inc. - Dubuque, Iowa
An American Architectural Products Corp. Company

CIRCLE 56 ON INQUIRY CARD

DOORS & WINDOWS



Metal, wood & plastic doors & frames • Corrosion-resistant doors • Metal, wood & vinyl windows • Door hardware • Exit devices • Glass • Glazing film

MOST INTERESTING WAS THE SUBMISSION OF FIBERGLASS WINDOWS—POTENTIALLY MORE DURABLE AND ENERGY-EFFICIENT THAN ALUMINUM AND VINYL. *—John Amatruda*

Contemporary lock device
The Inpact 94/9575 Mortise Lock Device is a single-door solution with the same backset, finishes, trim, and mechanical performance of the concealed rod Inpact exit device. 502/261-1176. Von Duprin, Indianapolis. CIRCLE 242

New contoured glass medium
Breez is a open-stock product line of compound, curved, laminated safety glass panels that are joined in a line, in circles, or along any curved path. 714/431-1190. CTEK, Santa Ana, Calif. CIRCLE 243

High-performance glazing unit
Solera introduces an insulated, translucent glazing unit that eliminates moisture build-up and condensation. 902/794-2899. Advanced Glazings Ltd., North Sydney, Nova Scotia. CIRCLE 244

Architect-designed glass
Designed by Arquitectonica's Laurinda Spear, FAIA, these stock glass patterns accommodate a wide range of design applications in textured, clear, and etched finishes. 773/278-4660. Skyline Design, Chicago. CIRCLE 245

Sleek European frames
Popular in Europe for years, this fire-rated product recently passed testing for U.S. production. Allowing for extremely large expanses of glass, the doors and frames are well suited to commercial applications. 800/426-0279. Technical Glass Products, Kirkland, Wash. CIRCLE 246

Rolling doors with a view
The Graphics Door creates a new set of options for rolling doors and rolling-counter door curtains and hoods. 800/233-8366. Cornell Iron Works, Mountaintop, Pa. CIRCLE 247

Door defeats corrosion
KhemPro's fiberglass-reinforced polymer doors and frames provide cost-effective protection against moisture penetration. 888/CECO-DOOR. Ceco Door Products, Brentwood, Tenn. CIRCLE 248



242



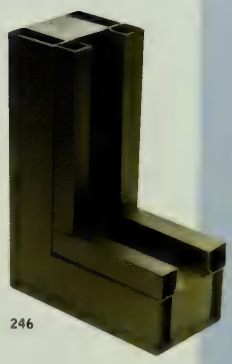
243



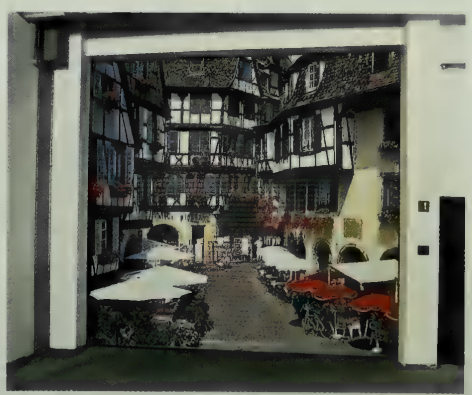
244



245



246



247

248



DOORS & WINDOWS

Metal, wood & plastic doors & frames • Metal, wood & vinyl windows • Door hardware • Exit devices • Glass • Glazing film

Wood or metal, stile and rail

The Wood Stile and Rail Door and the Metal Stile and Rail Door collections offer an extensive palette of design elements, including stiles and rails, insets, and finishes. Inset materials can be used for walls, elevator entrances, interiors, columns, and other features. 877/626-7788. Surfaces+, Carpinteria, Calif.

CIRCLE 249

Old-fashioned pulley system

The new Weight and Pulley Double-Hung windows feature a brass pulley system complete with brass chains and alloyed weights. 800/477-8656. Kolbe & Kolbe Millwork Co., Wausau, Wis.

CIRCLE 250

Sliding security

The TopLock security lock can be used with any sliding glass door having a glass thickness of 5/16, 3/8, or 1/2 inch. 800/423-3531. Hafele America, Archdale, N.C.

CIRCLE 251

Clear protection

Vista UVShield is an invisible residential window film that helps prevent sun glare, unbalanced heating, wasted energy, and dangerous UV rays. This dual reflective film offers high solar rejection yet provides visibility from inside to out at all times. The film is designed to provide high exterior and low interior reflectivity. 800/345-6088. CPFilms Inc., Martinsville, Va. CIRCLE 252

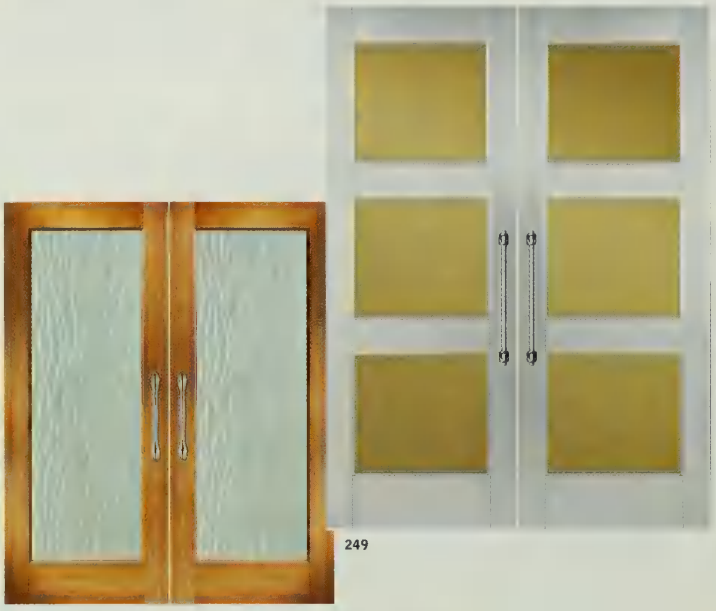
Welcome to the family

American Fir rounds out a family of softwood used in the Custom Wood Interiors Collection, which includes knotty pine and traditional pine. American Fir is ideal for classic and country settings, kitchens, and family areas of the home. 800/477-6808. Weather Shield Windows & Doors, Medford, Wis. CIRCLE 253

Accurate door closing

The new GSR coordinator system from Dorma provides correct sequential closing of pairs of doors equipped with overlapping astragals, panic devices, flush bolts, a cylindrical lock, or other door hardware assemblies that require one door to close before another. 800/523-8483. DORMA Architectural Hardware, Reamstown, Pa.

CIRCLE 254



249



250



251



253



252



254

The right door can make any place more inviting.





Now, think what our custom doors could do for your home. A door with no boundaries, save those of your imagination. A door handcrafted in the Old World style from the most beautiful hard woods available: Genuine Mahogany, Cherry, Maple, Walnut and Northern Red Oak. International Wood Products can deliver this door. All the way from your mind straight to your dream home. 1-800-877-9482 ext. IWP2 www.iwpdoor.com

IWP
Part of the JELD-WEN family

©1999 JELD-WEN, inc. All rights reserved. JELD-WEN, IWP and the IWP logo are registered trademarks of JELD-WEN, inc. Klamath Falls, OR

CIRCLE 57 ON INQUIRY CARD

DOORS & WINDOWS

Metal, wood & plastic doors & frames • Metal, wood & vinyl windows • Door hardware • Exit devices • Glass • Glazing film

High-tech garage door opener

The DoorMaster garage door opener is sensitive to obstacles in its path, without the use of photoelectric sensors. 800/827-3667. Wayne-Dalton, Mt. Hope, Ohio. CIRCLE 255

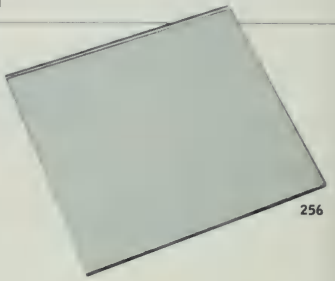


255

Latest solar tempered glass

Sun-Guard Silver offers the performance and color uniformity characteristics of a sputter-coated glass product. It can be tempered, bent, or heat-strengthened after the coating has been applied. 248/340-2105. Guardian Industries, Auburn Hills, Mich.

CIRCLE 256


256

Fiberglass passes the test

Arcon introduces a series of fiberglass window and door products. Arcon's laboratory testing program helps ensure that all products meet or surpass strict Canadian and American industry standards. 514/645-4444. Arcon Canada, Montreal. CIRCLE 257


257


258

New casement window style

A new casement window from Pella has a low-profile integrated crank hardware featuring a foldaway handle. 888/847-3552. Pella Corporation, Pella, Iowa.

CIRCLE 258


260

Custom glass art products

Windows, doors, side lights, dividers, partitions, and screens are produced by firing leaded mouth-blown stained and painted glass in a hot kiln. 718/361-8154. Ellen Mandelbaum Glass Art, Long Island City, N.Y. CIRCLE 259


259

Vinyl window system

A complete line of durable vinyl acoustical windows, with STC ratings from 40 to 44, is now offered. 800/755-6274. Graham Architectural Products, York, Pa.

CIRCLE 260

Panels with nature's designs

Richly embossed, custom-designed glass privacy walls suggest elements of earth, wind, and water, reflecting an eco-friendly sentiment. 800/777-2332. UltraGlas, Inc., Chatsworth, Calif. CIRCLE 261


261

Integrated door system

The Rite Door system includes the door and frame, an integral exit device, hinges, a variety of door finishes, trim, and electrification options. 800/872-3267. Adams Rite Manufacturing, Pomona, Calif.

CIRCLE 262


262

Superior Light Diffusion In A Maintenance-Free Glass Package.



Clayton Avenue School
Vestal, NY
Bearsch, Compeau, Knudson Architects
Binghamton, NY

Okalux® Insulating Glass Panels.



mal insulation.

OKASOLAR® insulating glass panels contain a custom-designed fixed-louver system and are engineered for the specific orientation of each glazing.

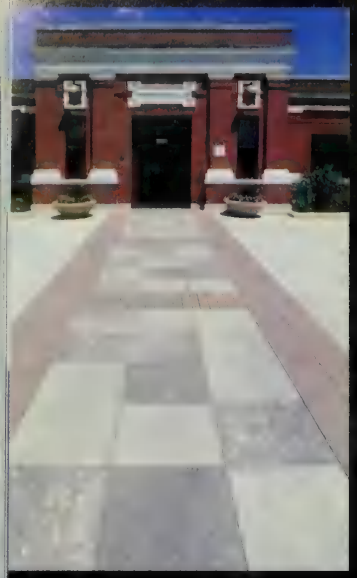
OKALUX® Light Diffusing and Insulating Glass panels provide high-quality, non-yellowing, natural illumination. Light transmission can be adjusted to the requirements of most projects. OKALUX® Light Diffusing and Insulating Glass panels have withstood the test of time and have been used in applications world-wide for schools and universities; museums and libraries; municipal, commercial and industrial buildings such as offices and sports complexes; shopping malls; airports and atriums. Also ask us about OKASOLAR® sun control panels with fixed integrated louvers for optimum light and heat control. For more information contact SCHOTT Corporation, 3 Odell Plaza, Yonkers, NY 10701, or call (914) 378-3839. And also visit our website at www.schottglass.com/okalux.htm.



SCHOTT
glass made of ideas

OKALUX® and OKASOLAR® are registered trademarks of OKALUX Kapillarglas GmbH, Marktheidenfeld-Altfeld, Germany.

CIRCLE 58 ON INQUIRY CARD



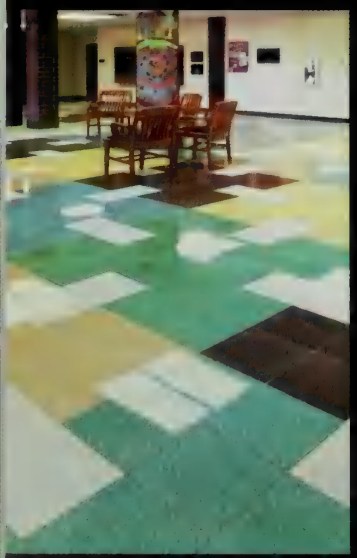


Architect: De Stefano+Partners









Extraordinary!

Get double- and triple-takes for your archtiectural designs with the help of Wausau Tile. Terrazzo tile and precast concrete pavers in full palettes of colors, finishes and sizes to meet your specific needs. Custom designs, colors, sizes, accessories our specialty. Give us a call today for your complete information package!

WAUSAU TILE

Wausau Tile P.O. Box 1520 Wausau, WI 54402-1520
800-388-8728 Fax 715-359-7456 www.wausautile.com

CIRCLE 59 ON INQUIRY CARD

FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications • Paint • Tile • Wall coverings • Wood & resilient flooring



IT'S GREAT TO SEE THAT IN ADDITION TO THE NEW PRODUCTS ON THE MARKET, PRODUCTS WE ALREADY USE ARE BEING REFINED TO BE MORE ENVIRONMENTALLY FRIENDLY. *—Terese Wilson*

Vinyl flooring for hipsters
Armstrong introduces a line of resilient vinyl floors in bright, vintage patterns. The four designs come in 14 colors, complete with a CleanSweep wearlayer for easy cleaning. 800/233-3823. Armstrong World Industries, Lancaster, Pa. CIRCLE 263

Clean and green
CrocoTile, DuPont's newest flooring system, is made from 100 percent recycled carpet material. Ideal for athletic facilities, anti-fatigue areas, bar and kitchen floors, ramps, and drainage areas, CrocoTile is adhesive-free and durable. 888/4-DUPONT. DuPont, Kennesaw, Ga. CIRCLE 264

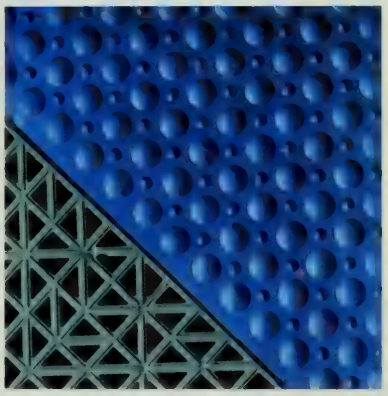
Pop the cork
Utilizing a renewable natural resource, Innovations has created an earth-friendly wallcovering with cork as its base. The 36-inch-wide product is washable and holds a Class A flame rating. 800/227-8053. Innovations in Wallcoverings, New York City. CIRCLE 265

Elemental tile
Earth, Fire, Water, and Wind, the basic components in the glass-making process, also serve as the inspiration for a new collection from Bisazza. Combinations of the tiles in random ratios of colors and styles are premixed, in stock, and ready for installation. 305/597-4099. Bisazza, Miami, Fla. CIRCLE 266

Three underfoot
Streatley Road sheet carpet by Bentley is a 36-ounce, 1/10-gauge, large-scale linear pattern in cut pile. Prince Street's Modern Office pattern has a complex finish combining varying sizes of loops with a subtle shearing. Interface debuted Great Plains as the first commercially viable carpet tile product manufactured from PLA, a natural resource derived from corn. 800/336-0225. Interface Americas Inc., Atlanta. CIRCLE 267



263



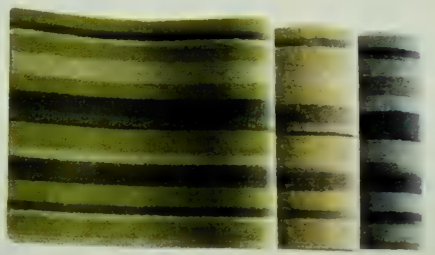
264



265

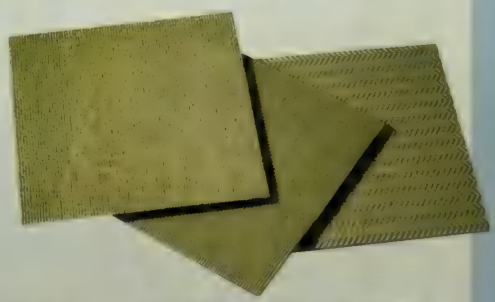


266



267





FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications • Paint • Tile • Wall coverings • Wood & resilient flooring

Pseudo granite surfacing

With its mineral surface and dimensionality, Basalto looks like flamed granite. Porcelain-bodied, this flooring by Daltile is appropriate for exterior applications. 800/933-8453. Daltile, Dallas.

CIRCLE 268

Bring the stars down to earth

Oonars, by Silver Creek, is a celestial display of pattern on a solid pile-cut field in three colorways with a coordinating nine-inch band border. 212/688-7447. Silver Creek/Bloomsburg Carpet, New York City.

CIRCLE 269

Party all night long

Designed for use under all laminate and floating wood floors, QuietGuard is an acoustical underlayment offering sound reduction for commercial and residential applications. 972/506-0480. Bruce Laminate Floors, Addison, Texas.

CIRCLE 270

The writing isn't on the walls

In the sandblasted or unpolished version, Sine Tempore porcelain stoneware is completely resistant to spray paint. 212/980-1500. Italian Trade Commission, New York City. CIRCLE 271

Counting sheet

Avalon's Chancery line, part of the Wools of New Zealand brand, offers a palette of 10 earthen colors on a striped-loop field. 800/627-6068. Avalon, Calhoun, Ga.

CIRCLE 272

Suspended ceiling

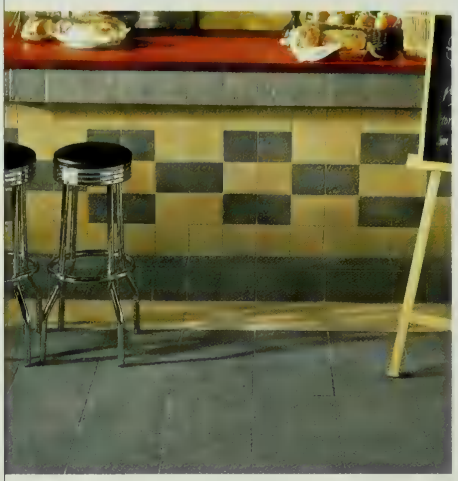
Armstrong's Optima Vector, a suspended acoustical ceiling with virtually no visible grid, helps transform open-plan areas into more effective upscale spaces. 888/234-5464. Armstrong World Industries, Lancaster, Pa. CIRCLE 273

Rethinking concrete

Patene Artectura transforms existing concrete surfaces into customized spaces through coloring, patterning, texturing, and finishing methods. 559/673-2411. Bomanite, Madera, Calif. CIRCLE 274

Hardwood from Hoboken

Eight species of Brazilian hardwood floors are available in the Indusparquet collection. All prefinished floors are kiln-dried and precision-milled, and timber is harvested only from managed forests. 800/222-1068. Hoboken Floors, Waynem, N.J. CIRCLE 275



268



269



270



271



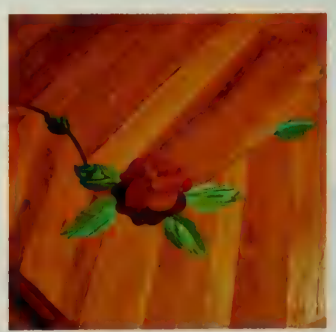
272



273



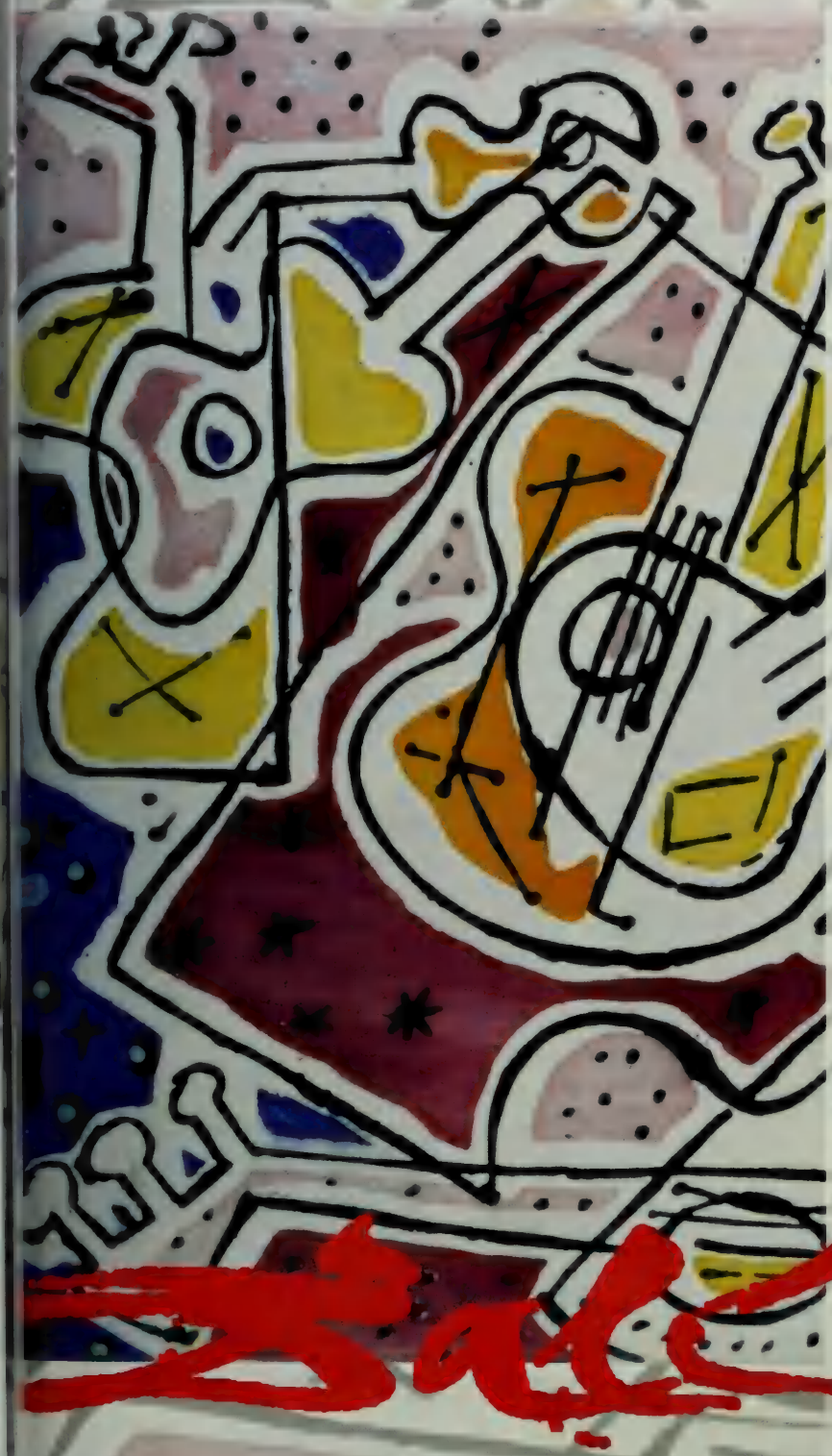
274



275

Tile of Spain

Autographed With Excellence



Throughout history, artists like Spain's Salvador Dalí have added new dimensions to their unique interpretations with the creative use of ceramic tile. Like Dalí, the tile manufacturers of Spain are regarded as masters of their craft.

For centuries, they have combined a history of craftsmanship and quality with forward-thinking technologies. Today, they continue to set industry standards and develop the techniques and products of the future, from handmade to high-tech.

No other ceramic tile offers the prestige of the finest European products at such attractive price points. Tile from Spain delivers quality, service, and a stylish array of elegant designs and rich textures, priced to enhance profitability.

When it comes to floor and wallcovering options, the mark of excellence to look for is "Made in Spain".



For more information:
Tile of Spain Center, 2655 Le Jeune Road,
Suite 1114, Coral Gables, FL 33134
Phone: 305.446.4387; Fax: 305.446.2602
E-mail: buzon.oficial@miami.ofcomes.mcx.es
Web Site: www.tilespain.com

Image of ceramic tile by Salvador Dalí courtesy of The Salvador Dalí Museum, St. Petersburg, Florida.

TILE OF SPAIN

CIRCLE 60 ON INQUIRY CARD

FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications • Paint • Tile • Wall coverings • Wood & resilient flooring

Keeping clean

WonderGliss, a new ceramic surface from Duravit, deprives dirt of the ability to cling to bathroom fixtures. Hygienic and labor-reducing, WonderGliss eliminates the need for heavy and caustic cleaning agents. 888/387-2848. Duravit, Duluth, Ga. **CIRCLE 276**

Northern natives

FineWood, PermaGrain's new line of prefinished flooring, features seven natural North American hardwood species in traditional and contemporary hues. 610/353-8801. PermaGrain, Newtown Square, Pa. **CIRCLE 277**

Take it easy

ComforTech Anthem's cushioned inner layer provides all-season thermal protection in a noise-reducing flooring. Slip resistance helps minimize foot and leg fatigue. 800/899-8916. Johnsonite, Chagrin Falls, Ohio. **CIRCLE 278**

Group effort

In collaboration with a team of designers from around the world, Milliken developed the Image Series as a collection of customer-influenced designs. 706/880-3327. Milliken Carpet, LaGrange, Ga. **CIRCLE 279**

Outdoor effects

Round and oblong colored porcelain pebbles are mesh-mounted to coordinate with the rustic field tiles in the Del Conca Antica Asolo series. 212/980-1500. Italian Trade Commission, New York City. **CIRCLE 280**

Underlay alternative

Isobord has introduced a new underlayment product made from strawboard and non-formaldehyde resins in place of lauan plywood. 503/242-7345. Isobord Enterprises, Portland, Ore. **CIRCLE 281**

No-hassle aluminum ceiling

Sonata from Armstrong offers the detailing and look of an extruded aluminum ceiling suspension system without the labor-intensive installation process. 888/234-5464. Armstrong World Industries, Lancaster, Pa. **CIRCLE 282**

Essence of Spain

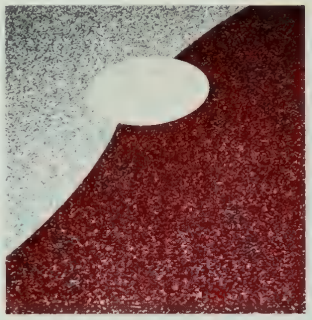
The textures and colors of the cut and loop España Collection capture the essence of Spain in intricate detailing, height, and texture. 800/523-5647. Lees, Greensboro, N.C. **CIRCLE 283**



276



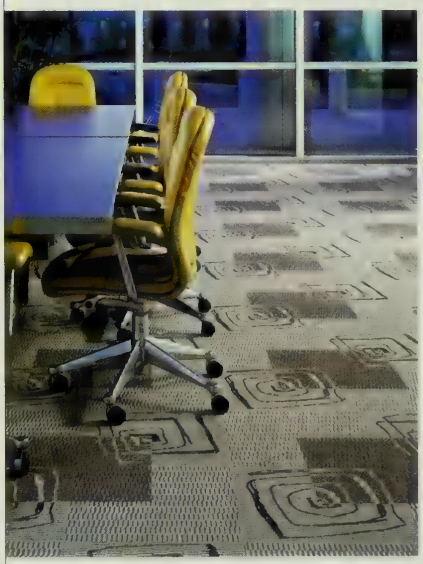
277



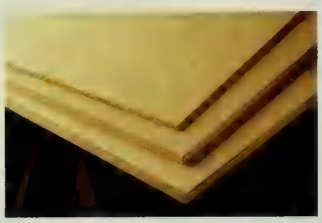
278



280



279



281



282



283

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

Once there was a beautiful painting. And everyone loved it.
The artist was asked to sell it often and for large amounts of money.
It was so coveted, in fact, that people began to copy it. Soon everyone
could have the painting if they wanted it. The funny thing was, though,
no one wanted it anymore.

www.annsacks.com 1+800+969+5217

ANN SACKS

tile stone plumbing

CIRCLE 61 ON INQUIRY CARD

FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications • Paint • Tile • Wall coverings • Wood & resilient flooring

The secret's in the yarn

An ultrafine, round, monofilament yarn gives Xorel Three an industrial, sleek, metallic look. 800/727-6770. Carnegie Fabrics, Rockville Centre, N.Y. **CIRCLE 284**

Thick color carpets

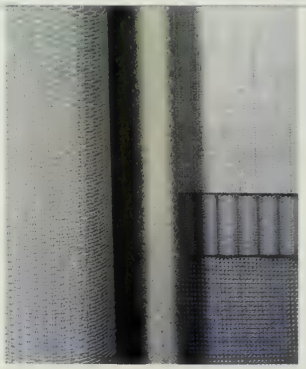
Textura's thick, looped texture, crafted by Woolshire from heathered yarns and solid-color accents, creates a display in 10 colorways. 800/799-6657. Woolshire Carpet Mills, Calhoun, Ga. **CIRCLE 285**

Shine on

Gilded and antiqued, the It's Old, It's Gold embossed surface works as a luminous covering for walls and ceilings. 201/217-2267. Willem Van Es Design Studio Ltd., New York City. **CIRCLE 286**

Work that floor

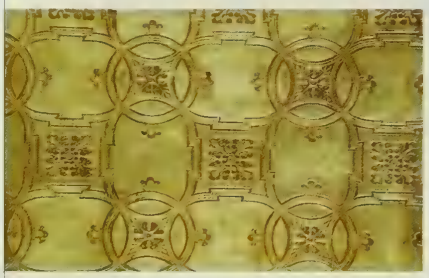
Mannington Commercial's GLS Series is a heavy-duty, high-performance, homogeneous sheet flooring available in six-foot widths. Four unique patterns enhance commercial and institutional settings. 800/241-2262. Mannington Commercial, Salem, N.J. **CIRCLE 287**



284



285



286



287

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

NOW AVAILABLE!



Firm Survey
Hard Facts

AIA Firm Survey 2000–2002

The most accurate and comprehensive source of financial- and practice-management information presents responses collected from over 1,700 architecture firms across the U.S.

$95/$35 AIA Members

To order call
800-365-ARCH

FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications • Paint • Tile • Wall coverings • Wood & resilient flooring

Decorative tiles

Folia Permanent Graphic Flooring's high-pressure, wear-resistant laminate tiles are designed for floating installations. 888/264-6122. Folia Industries, Huntingdon, Quebec. CIRCLE 288

Holding up the roof

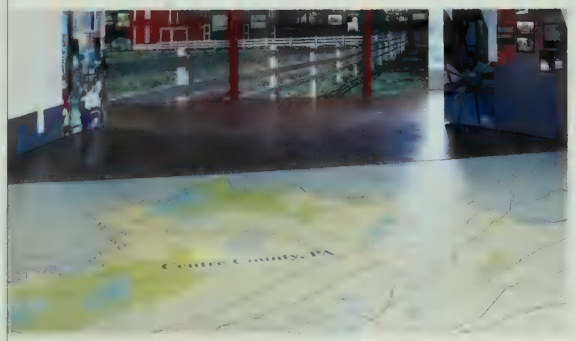
GRG (Glass Reinforced Gypsum) Classic columns and cornices provide professional durability, economy, and design in architectural ornamentation. 800/963-3060. Melton Classics, Lawrenceville, Ga. CIRCLE 289

High-tech porcelain

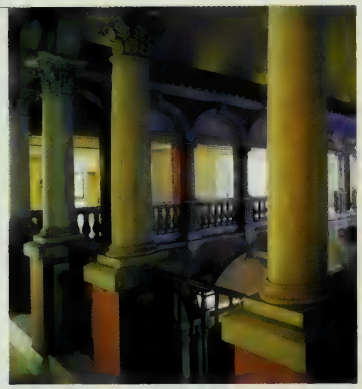
Blue Stone high-tech porcelains come in three finishes and a range of modular formats. All are frost-, chemical-, and stain-resistant. 212/980-1500. Italian Trade Commission, New York City. CIRCLE 290

Carpet grids

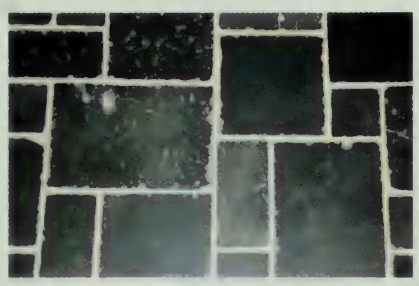
Bellbridge has looped three colors of wool yarns into a grid pattern to create its Evora line, recommended for heavy commercial use. 800/227-3408. Bellbridge Carpet, Benicia, Calif. CIRCLE 291



288



289



290



291



Another
DRAINAGE
SOLUTION
by Mortar Net™

Mortar Net™ Block's **patented** shaped mortar dropping collection device prevents water damage in single wythe concrete masonry unit (CMU) walls by breaking up mortar, thereby allowing proper drainage to the weep holes. To ensure optimum performance of concrete masonry walls, specify Mortar Net™ Block.

800-664-6638 www.mortarnet.com

Mortar Net™
The Difference Is In *The Cut.*

CIRCLE 62 ON INQUIRY CARD

FINISHES

Acoustical ceilings • Carpet • Ceiling suspension • Gypsum fabrications • Paint • Tile • Wall coverings • Wood & resilient flooring

Color palette

The Azrock Linosom linoleum line from Domco gives designers a natural, eco-friendly product in 19 colors and 40 shades. 800/921-1717. Domco, Florence, Ala. **CIRCLE 292**

Acoustical ceilings

Laminated ceiling panels feature a smooth, monolithic appearance in Celotex's new acoustical product, Serene m. 800/CELOTEX. BPB Celotex, Tampa. **CIRCLE 293**

Scale variation

One pattern is offered in small, medium, and large scales to create a unique visual in the new Urbana line from Invision. 800/859-9558. Invision Carpet Systems, Dalton, Ga. **CIRCLE 294**

Safety floors

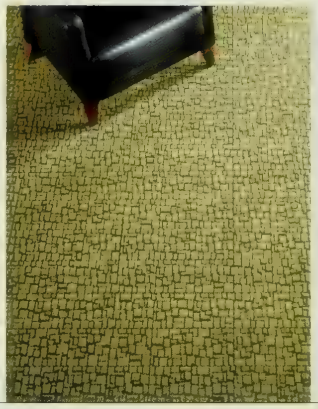
Versa Floor offers antislip and fatigue-relieving properties to improve safety and productivity. The floor system provides a high level of thermal and acoustic insulation. 800/533-4267. Innovative Flooring, Chatsworth, Ga. **CIRCLE 295**



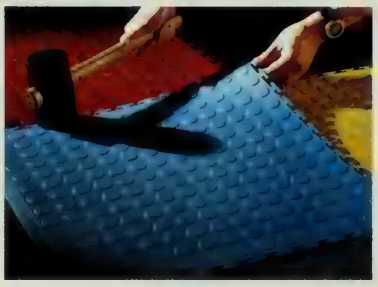
292



293



294



295



GET THE BLUEPRINT FOR QUICKER DESIGNS. FREE

GET YOUR **FREE** CADBLOCKS™ CD-ROM TODAY



With CADBlocks, you'll enjoy quicker, more accurate designs with no more tedious redrawing. You'll get thousands of up-to-date drawings of building products from leading manufacturers. All in standard format with attached technical information. You'll never search through mountains of catalogs, or stacks of CDs and floppies again. With CADBlocks all you do is drop the drawing you need right into your design. There is no easier way to work. New features for 2000 include: more search options, history window, dimensional read-out measuring tool, an option to modify and bookmark frequently used parts and multiple product views with printable "infopoint" displays.

AutoCAD COMPATIBLE

FOR YOUR FREE CADBLOCKS CD-ROM CALL TOLL FREE (800) 432-9228, CODE 5436
OR QUALIFY ONLINE AT www.thomasregister.com/af/cadtitles23

Published by Thomas Register® in partnership with autodesk Content by CMDGROUP

Five Penn Plaza, New York, NY 10001 • FAX: (212) 290-7365 • www.thomasregister.com/af/cadtitles23

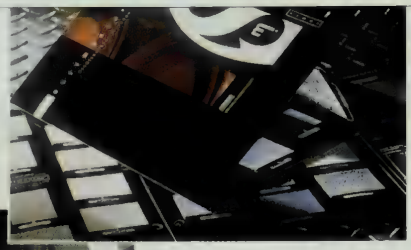
61021AD010

Eternal paint

Scuffmaster Armor, billing itself as the world's toughest paint, is a water-based multicolor or tone-on-tone wall finish for commercial environments; it is formulated with polyurethane and fortified with DuPont Kevlar. ScrubTough polyurethane-fortified eggshell paint is a latex paint for interior walls offering 10 times the scrubability of ordinary acrylic products. A water-based metallic paint finish, formulated with cross-linked polyurethane for durability and effective cleaning, gives a smooth, automotive-like metallic finish to interior walls. 800/898-0219. Scuffmaster Architectural Finishes, Minneapolis. **CIRCLE 296**

Celtic trilogy

Three patterned carpets of Kerry, Kinsale, and Wexford form the new Celtic Collection, recently refined with modified colorways and reduced face weight to enhance performance. 800/523-5647. Lees, Greensboro, N.C. **CIRCLE 297**



296







297

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



CIRCLE 64 ON INQUIRY CARD

cast glass









Nathan Allan
Glass Studios Inc.
Suite 118 - 11180 Coppersmith Place, Richmond, BC Canada V7A 5G8
Telephone 604/277.8533 · Facsimile 604/277.4515 · Website www.nathanallan.com

CIRCLE 65 ON INQUIRY CARD

SPECIALTIES

Access floors • Signage & graphics • Toilet & bath accessories • Exterior sun control • Chalkboards & tackboards



THE STRAWBOARD PRODUCT IS CLEARLY MAKING STRIDES TO BE ACCEPTED AS A LOW-COST ALTERNATIVE TO PARTICLE BOARD. —*John Amatruda*

Bathroom unity
The Valli l'arredobagno hardware and accessory collection is available in several coordinating finishes. 877/326-2565. Gruppo Valli & Valli, New York City. CIRCLE 298

Access flooring
The C-Tec Series raised flooring system uses panels of composite steel and concrete to create a solid platform with space for cabling and air distribution. 312/822-9640. Interface Architectural Resources, Grand Rapids, Mich. CIRCLE 299

Digital note taker
The Hawkeye whiteboard capture system combines digital cameras and an internal processor to record meetings passively. 888/42-SMART. SMART Technologies, Alberta, Canada. CIRCLE 300

Technology platform
The Building Technology Platform integrates cabling, access flooring, and air systems into one package. 410/799-4774. Tate Access Floors, Jessup, Md. CIRCLE 301

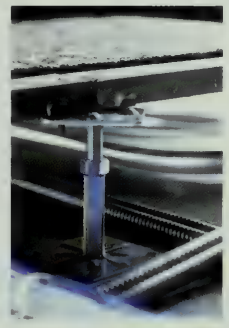
Not just blowing hot air
Made from drawn steel, the Eclipse automatic hand dryer is available in either polished chrome or white enamel. 800/553-1600. Bobrick Washroom Equipment, North Hollywood, Calif. CIRCLE 302

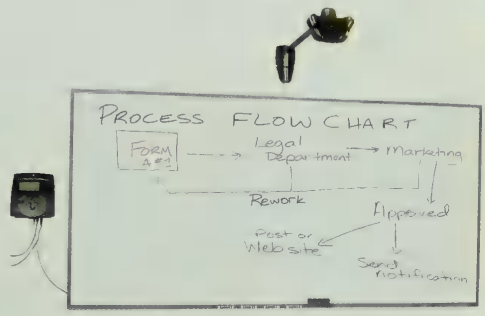
Shades of shades
Intended for exterior or interior use, PhiferScreen 530 is a versatile fabric sun-control alternative available in a variety of colors. 800/633-5955. Phifer Wire Products Inc., Tuscaloosa, Ala. CIRCLE 303

A place for the ornaments
StorageBord premium engineered strawboard tongue-and-groove panels help increase attic storage space. 503/242-7345. Isobord Enterprises Inc., Portland, Ore. CIRCLE 304

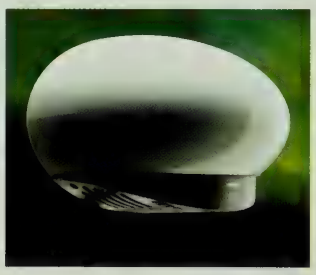
Go ahead and get lost
The Arcus Information System features curved contours and is based upon a series of aluminum extrusions in various configurations and sizes. 800/553-7722. Cornelius+, Carpinteria, Calif. CIRCLE 305

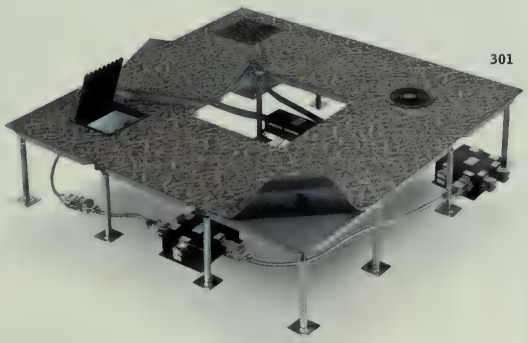

298


299

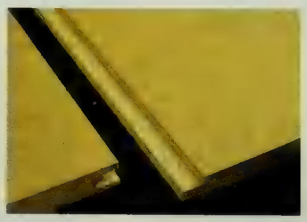


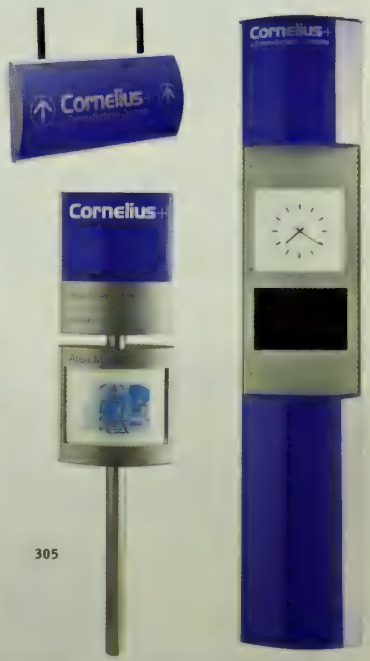
300


302

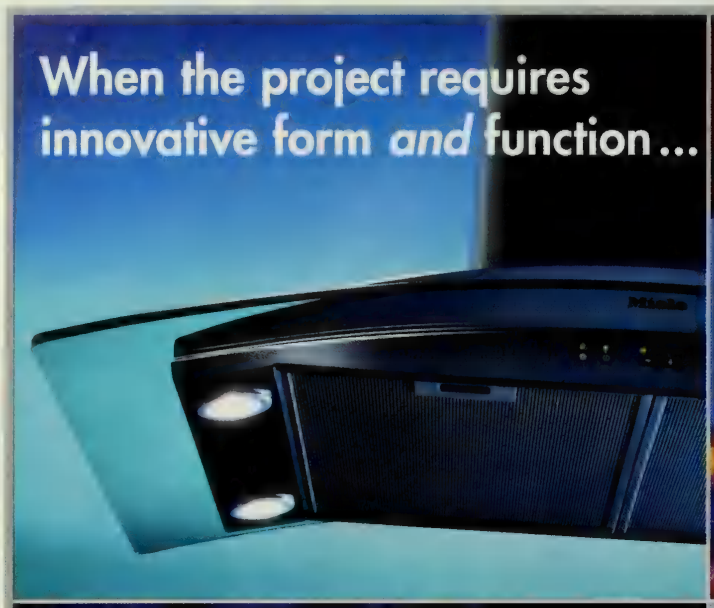

301


303


304



305









Miele delivers.

Realizing your architectural vision requires design flexibility from the components you specify. From a collection of ventilation hoods and cooking products that are as elegant as they are functional, to the world's first built-in coffee system. From a dishwasher so fully integrated that it's invisible, to laundry systems that can be configured to any environment. Miele offers technological solutions to satisfy both the designer and the most demanding client. Without compromise. This dedication to quality and innovation is matched only by our commitment to comprehensive service and support.

For assistance in specifying Miele for your next project, or to access the many other services of the Miele Architects & Designers Resource Group, call 800-843-7231, or visit us at www.mieleusa.com.

Miele
ARCHITECTS & DESIGNERS
RESOURCE GROUP

Princeton ▪ Beverly Hills ▪ Boca Raton ▪ Dallas • Northbrook • San Francisco • Wellesley

CIRCLE 66 ON INQUIRY CARD

EQUIPMENT

Kitchen & bath cabinets • Kitchen hoods & ventilation • Residential appliances



MIELE INCORPORATES THE LATEST COOKING TECHNOLOGY WITH THE CLEANEST DESIGN. —Katherine Sutton

Stainless-steel space

Monogram's stainless-steel island hood provides an alternative to downdraft ventilation. Using Speedcook technology, the built-in Advantium oven can cook traditional oven dishes in an average of one-quarter of the time of a conventional oven. Seventy-two inches of door surface on the built-in Advantium refrigerator/freezer allow for custom-panel installation. 800/626-2000. General Electric, Louisville. CIRCLE 306

Material matrix

Bulthaup's new material scheme within the System 24 kitchen cabinetry includes environmentally friendly linoleum made from natural raw materials, stable aluminum edges, and stainless-steel cutting surfaces for easy-to-clean durability and chemical resistance. 310/288-3875. Bulthaup USA, Los Angeles. CIRCLE 307

Make it fresh

Miele's built-in coffee system will froth or steam milk with a steam wand, distribute hot water through a separate spout, and allow for grind preference and temperature control. The convection steam oven can cook most foods in under 20 minutes, retaining vitamins and minerals that are otherwise lost. 800/843-7231. Miele, Princeton, N.J. CIRCLE 308

Cabinet lines

The lines of Giorno's low, mirror, and tall cabinets contrast with material combinations of glass, aluminum, alder, and wenge wood. The straight lines of the cabinets alternate with playful details, such as the leaf-shaped aluminum door handles. 888/DURAVIT. Hoesch/Duravit, Duluth, Ga. CIRCLE 309

Home on the range

The Designer Series by Viking Range includes a variety of distinctive commercial-type products for the home, including cooktops, ventilation systems, and refrigerators. 888/VIKING1. Viking Range, Greenwood, Miss. CIRCLE 310







306



307



308





309





310



Nouveau

VIKING.

A nontraditional kitchen for the nontraditional cook. The Viking Designer Series will soon introduce an entirely new look for professional performance. Striking curves, clean lines, and ergonomically designed elements like soft-touch knobs and contoured handles will deliver the complete Viking kitchen with an extra dash of style. Because as any chef will tell you, presentation is everything.

VIKING®
DESIGNER SERIES

www.vikingrange.com 1-888-845-4641 *Viking products are marketed under the Ultraline® brand name in Canada*

CIRCLE 67 ON INQUIRY CARD

FURNISHINGS

Fabric treatments • Manufactured casework • Multiple-use fixed seating • Healthcare/school/library/hotel furniture • Systems furniture



I THINK THE USE OF MORE COLORFUL AND LUMINOUS MATERIALS AND FINISHES GREATLY ADDS TO THE PRODUCTS' AESTHETICS. —*Katherine Sutton*

Cast-aluminum options

Mark Kapka developed Jet, a modular system of elements that center around a cast-aluminum framework. Designed by Andrew Jones, Gym is a stacking chair of translucent plastic on a tubular steel frame available in a variety of colors and finishes. Brandon, by EOOS, is a collection of lounge seating options and tables with a characteristic elliptical steel leg. 800/724-5665. Keilhauer, Scarborough, Ontario. CIRCLE 311

Wired tables

Designed by Mark Müller, the Vox furniture collection expands to include Vox Training Tables, which integrate furniture and technology through built-in wiring. The tables are available in a variety of shapes and sizes. 800/668-9318. Nienkämper, Scarborough, Ontario. CIRCLE 312

Stain-resistant coating

Intended for high-traffic areas where stains are a problem, Designworks-Crypton is a high-technology fabric system that uses a patented process to encase fabric in a flexible and breathable coating that is stain- and water-resistant. 800/333-3777. Robert Allen Contract, Mansfield, Mass. CIRCLE 313

Talk to each other

Sidewalk is a complete seating environment that creates a relaxed, comfortable ambience and promotes group interaction through soft, upholstered seating and an open arrangement. 800/627-6770. Brayton International, High Point, N.C. CIRCLE 314

Pack it up

Available in a variety of sizes and surface treatments, Train is a versatile series of computer training tables. In addition to managing computer wiring and cables, the tables flip, nest, and roll for easy storage and mobility. 972/641-2860. Vecta, Grand Prairie, Tex. CIRCLE 315

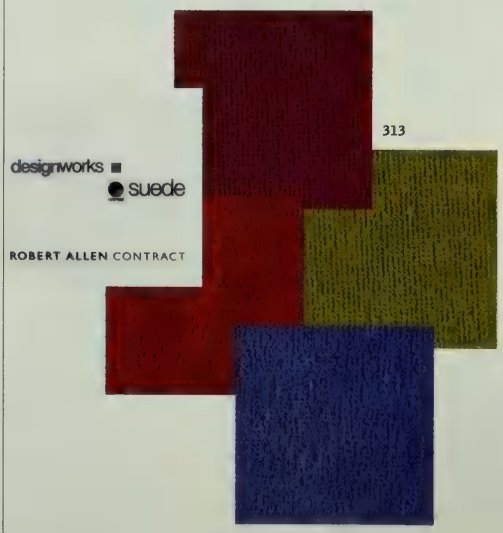


311

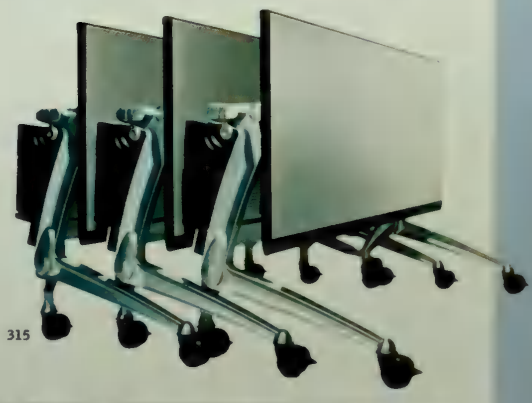
312



314



313



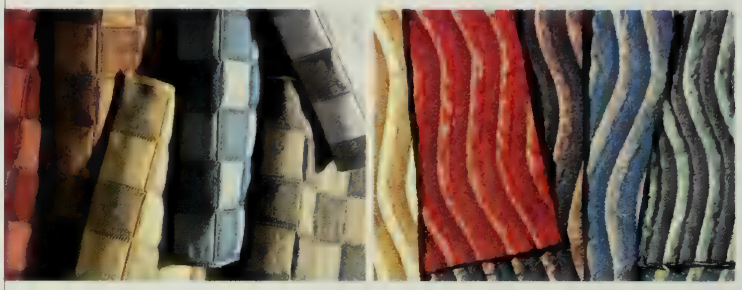
315

FURNISHINGS

Fabric treatments • Manufactured casework • Multiple-use fixed seating • Systems furniture

Patterns on the rise

Pallas designer Lori Weitzner used puckers and raised and lowered effects to achieve the contemporary three-dimensional designs in the new Ascension collection. 800/4-PALLAS. Pallas Textiles, Green Bay, Wis. **CIRCLE 316**



316

Work in bed

Cassina's Sleepy Working Bed marries work and sleep in a single unit. A functional bed complete with headboard, night tables, and bedside task lighting, this piece also sports an attachable shelf and lamp to transform it into a workspace. 800/770-3568. Cassina USA, Huntington Station, N.Y. **CIRCLE 317**



317

Conference room on the go

Huddleboard's Mobile Easel stores 10 marker boards, providing over 187 square feet of space. Huddleboard marker boards weigh less than five pounds, can be used in horizontal or vertical positions, and are available in two sizes. 800/333-9939. Steelcase, Grand Rapids, Mich. **CIRCLE 318**



31

Sit down and stay down

The ergonomic design of Medallion stadium seating by the Hussey Seating Company helps increase blood flow and back support for improved sitting comfort. 207/676-0234. Hussey Seating, North Berwick, Maine. **CIRCLE 319**



319

Do it your way

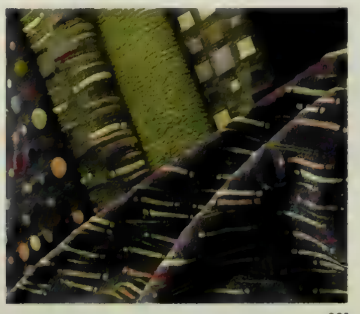
Switch by SMED is a high-performance workspace with flexibility that allows a user to change the angle of the branch wall, pull out a whiteboard for privacy, or put storage, walls, or work surfaces anywhere along the main wall. 800/661-9163. SMED International, Calgary. **CIRCLE 320**



320

Past made present

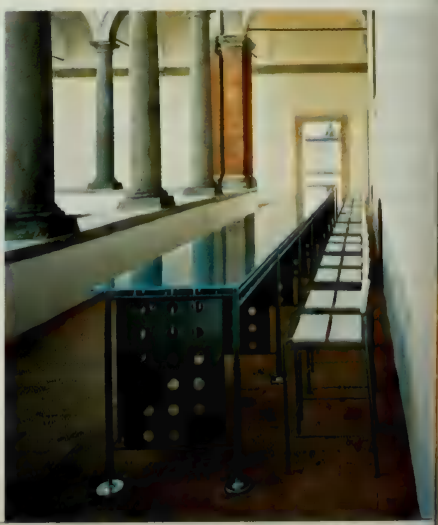
Colorful creations from Alexander Giroud, world-renowned mid-century textile designer, inspired the three woven fabrics of Unika Vaev's new collection, Cosmopolitan. 800/237-1625. ICF Group, Valley Cottage, N.N.Y. **CIRCLE 321**



321

Line them up

Functional and modular, the Marengo tables by Zero form an endless string of configurations to create conference and reception tables. 401/724-4470. Zero, Lincoln, R.I. **CIRCLE 322**



322

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertising and Product Info

IndiQuest...
innovative, indirect and in demand.



Our passion for creating high-tech lighting turned upside down and inside out when IndiQuest joined Alera's popular Quest line. Lightweight, compact, and stylish, IndiQuest is the smart choice for today's indirect lighting needs.

Embossed with a unique honeycomb pattern, IndiQuest delivers durability and sophisticated European styling. A newly designed hanging bracket adds a contemporary look to a proven suspension system. Surprisingly economical, IndiQuest shines in high-end applications.

Inspired illumination from Alera Lighting gives a new perspective to indirect lighting. Call your Alera representative today for more information about this exciting new direction.

ALERA™
LIGHTING

3808 NORTH SULLIVAN ROAD, BLDG. 29 · SPOKANE, WA 99216 · 509.921.8300 · FAX 509.921.8360

LIGHTING CORPORATION OF AMERICA

CIRCLE 68 ON INQUIRY CARD

FURNISHINGS

Fabric treatments • Manufactured casework • Multiple-use fixed seating • Systems furniture

Stacking chairs

The Eddy stacking chair is now available in four new translucent colors. Made of polypropylene plastic, the chair has optional clip-on upholstered seat and back pads, armrests, row and seat numbering, and writing tablets. 800/995-6500. Dauphin of North America, Boonton, N.J. **CIRCLE 323**

Put them together

Inspired by the simplicity of early-20th-century Modernism, designers at Datesweiser created xo, a modular kit of parts combining aluminum with traditional materials such as granite, glass, maple, and mahogany. 800/466-7037. Datesweiser, Buffalo. **CIRCLE 324**

Polyurethane piece

Blob, a new angle- and-line-free chair from Nienkämper designer Karim Rashid, curves organically to accommodate the contours of the body. 800/668-9318. ICF Group, Valley Cottage, N.Y. **CIRCLE 325**

Make the most of the floor plan

Composed of easily movable, pull-out shelving units, QuickSpace by Spacesaver more than doubles the storage capacity of existing space by eliminating aisles, while still providing quick access to materials. 800/492-3434. Spacesaver Corp., Fort Atkinson, Wis. **CIRCLE 326**

Out of the rain

RealFurniture.com, an online furniture retailer offering Modernist classics to design-savvy consumers, launched its first collection of decorative accessories with a sleek umbrella stand. 800/257-7764. RealFurniture.com, New York City. **CIRCLE 327**

Moving in place

The dominant ergonomic characteristic of Lucy, the new Doug Ball chair by Vecta, is a translucent pellathane back that moves with the user during activity. 972/641-2860. Vecta, Grand Prairie, Tex. **CIRCLE 328**

It takes two

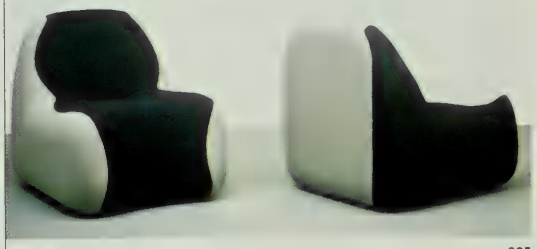
The self-supporting TableBed from Inova makes double use of limited space, sliding out into a bed at night and folding up during the day to reveal a table for five. 212/932-1446. Inova, New York City. **CIRCLE 329**



323



324



325



326



327

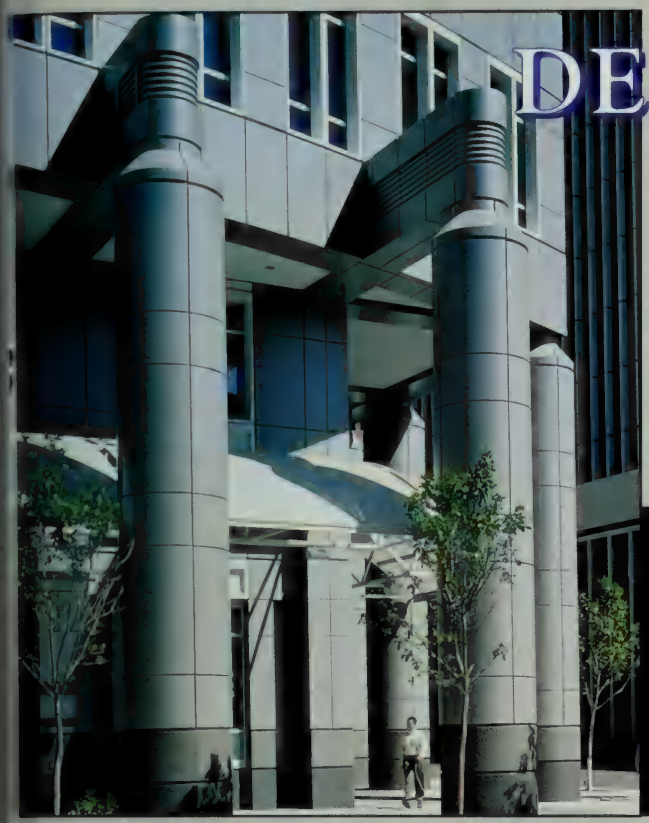


328



329





DESIGN AS HIGH OR AS WIDE AS YOU CAN DREAM...

With Strong, Lightweight and Durable Metal Wall and Cladding Systems

A complete palette of colors and finishes, textures and profiles for the most discriminating designers of high- and low-rise commercial, institutional and industrial buildings.

Contact the Metal Construction Association for some free thought-provoking ideas, technical literature, Merit Awards entry brochure and more information on MCA's Metal Wall Panel Council.

104 S. MICHIGAN AVE.
STE. 1500
CHICAGO, IL 60603
PHONE: 312-201-0193
FAX: 312-201-0214
www.mca1.org



MCA
Metal Construction Association

CIRCLE 69 ON INQUIRY CARD

FURNISHINGS

Fabric treatments • Manufactured casework • Multiple-use fixed seating • Systems furniture

Waiting around

The Palette Lounge Series, designed by Wolfgang C.R. Mezger for Davis Furniture, offers a plethora of solutions for the waiting/working environment, with rotating tables and generous seating. 336/889-2009. Davis Furniture, High Point, N.C. CIRCLE 330

Change it up

Haworth introduces if, a furniture system for office spaces. In freestanding environments, a utility chain integrates power and allows for floor-plan adjustments without disrupting power flow. Jump Stuff II work tools offer active storage and organization. 800/344-2600. Haworth, Holland, Mich. CIRCLE 331

High-tech origami

Designed to look as if it were folded from a single sheet of metal, Fabiaan Van Severen's Rincon table is executed in stainless steel with the option of custom-designed etchings for tabletops. 877/525-5566. DesignForm+, Carpinteria, Calif. CIRCLE 332



330



331





332

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertising and Product Info

For *Elegance* and **Durability**

CONTINENTAL HARDWOOD BRIDGES



Naturally Durable Hardwood Bridges.
Maintenance friendly and requires no preservative treating.
Customized to compliment your architectural statement.

1-800-328-2047

CONTINENTAL BRIDGE

www.continentalbridge.com E-mail: conbridg@continentalbridge.com

CIRCLE 70 ON INQUIRY CARD

International Codes on CD Starter Bundle

If you are starting to explore the new world of the 2000 *International Codes*, the Starter Bundle is an easy-to-use and affordable option.



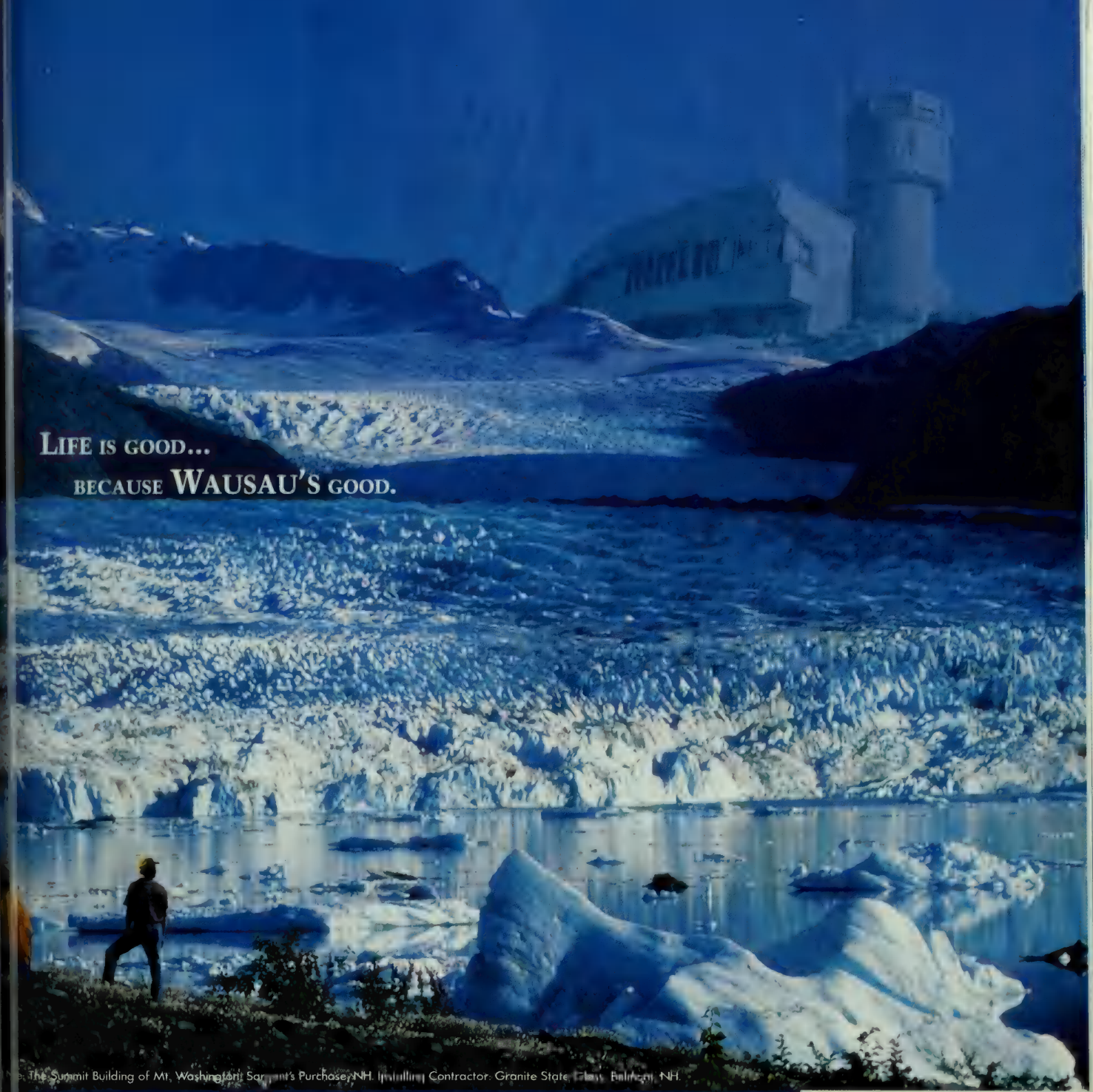
This CD contains PDF versions of all the 2000 *International Codes — Building, Residential, Fire, Mechanical, Plumbing, Private Sewage Disposal, Fuel Gas, Energy Conservation, Zoning* and *ICC Electrical Codes* — on one CD. You can view the complete code text on your computer and use limited search options. **Only $99 BOCA member price, $125 list price.**

For credit card orders, call
1-800-214-4321, ext. 712
BOCA provides FREE and PROMPT shipping.

BOCA BUILDING OFFICIALS CODE ADMINISTRATORS INTERNATIONAL

www.bocai.org

CIRCLE 71 ON INQUIRY CARD



The Summit Building of Mt. Washington's Sargent's Purchase, NH. Installing Contractor: Granite State Glass, Belmont, NH.

THE ELEMENTS OF SUCCESS.

Wausau Window and Wall Systems has built an unequaled reputation by providing the best products backed by the best customer service in the industry. Whether you're building in the harshest environment on earth, or maybe you just have an idea that's a bit out of the ordinary, you're in our element. Contact us today and everything will be cool.



Life is good... because Wausau's good.

WAUSAU

WINDOW AND WALL SYSTEMS

CIRCLE 72 ON INQUIRY CARD

1.877.678.2983

www.wausauwindow.com

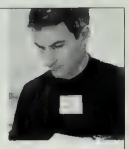


1.800.442.2258 / www.sweets.com

CIRCLE 73 ON INQUIRY CARD

A Division of The McGraw-Hill Com
©2000, McGraw-Hill Com

SPECIAL CONSTRUCTION & CONVEYING SYSTEMS



Grandstands & bleachers • Cable-supported & fabric structures • Whirlpool spas & hot tubs • Sound control • Elevators • Moving walks

I JUST LOVE THE IDEA OF A HOT TUB MADE OUT OF STAINLESS STEEL. IT IS PART UTILITARIAN, PART SCULPTURE. —*Craig Konyk, AIA*

In the shade

Birdair Lite's new line of preassembled, freestanding shade structures can be linked for continuous weather protection and either permanently fixed or mounted for removal and storage. 800/622-2246. Birdair, Amherst, N.Y. CIRCLE 333

Built-in baths

Available in both corner and off-wall models, Giorno Built-In Whirlpool baths are made by Hoesch from high-quality sanitary acrylic; they offer four whirl systems. 888/DURAVIT. Hoesch/Duravit, Duluth, Ga. CIRCLE 334

Stadium seating

MAXAM creates flexible gymnasium seating for multiuse facilities. These structures can accommodate five different row-spacing options, removable safety rails, and transverse decking for a stiff walking surface. 207/676-2271. Hussey Seating, North Berwick, Maine. CIRCLE 335

Moving up

The CabForm Series 2000 system features unique stile, rail, and inset designs for pre-engineered elevator interiors. 877/626-7788. Forms+Surfaces, Carpinteria, Calif. CIRCLE 336

Noise down, quiet up

Scamp Sound Masking System's acoustical treatments increase speech privacy and reduce noise distractions to improve acoustic comfort. 905/844-2622. K. R. Moeller, Oakville, Ontario. CIRCLE 337

Don't walk

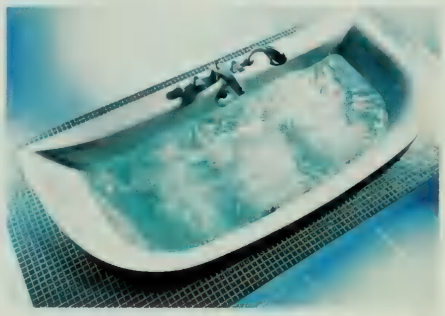
Schindler introduced its 9500 moving-walk series to eliminate long walks from heavy traffic patterns, indoors and outdoors. 973/397-6500. Schindler Elevator, Morristown, N.J. CIRCLE 338

Bottoms up

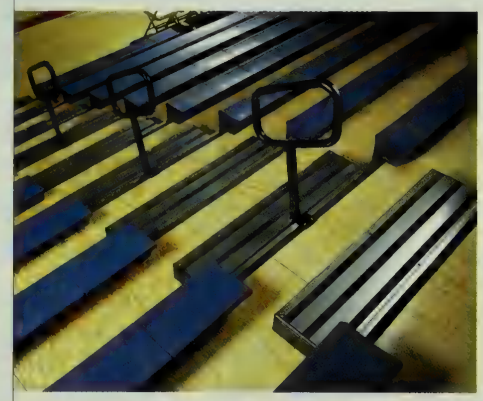
Diamond Spas constructed this stainless-steel whirlpool bath with a contoured bottom, visible weld seams, and a hand-buffed finish. 800/951-7727. Diamond Spas, Broomfield, Colo. CIRCLE 339



333



334



335



336



337

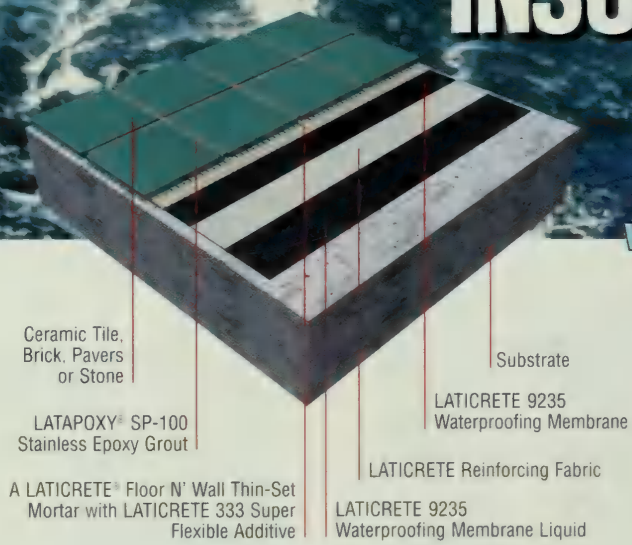


338

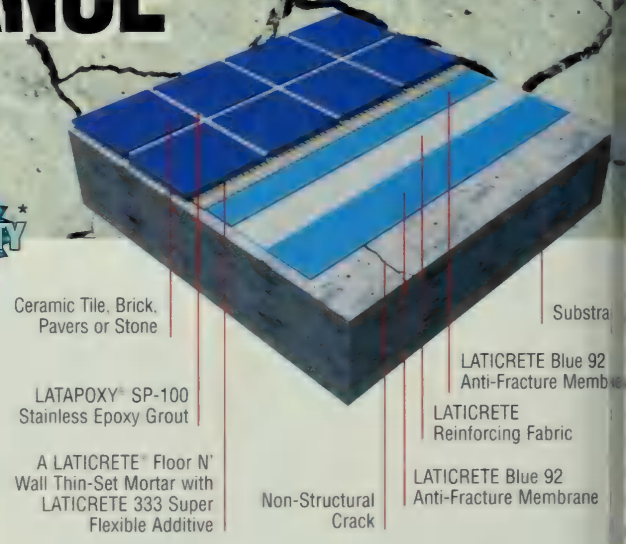


339

Tile & Stone Waterproofing & Anti-Fracture INSURANCE



HASSLE FREE WARRANTY*



LATICRETE® 9235 Waterproofing Membrane

"The Architects' Choice for RISK FREE Installations"

- Guaranteed not to leak or crack*
- Dual purpose – for waterproofing *and* anti-fracture applications
- IAPMO, ICBO approvals
- Meets rigid DIN standard for anti-fracture membranes
- Full fabric application
- *Extra Heavy-Duty* Floor Service Rating
- Approved for continuous submersion in pools and fountains

LATICRETE Blue 92 Anti-Fracture Membrane

"When you only need anti-fracture protection"

- Guaranteed against cracking*
- Easy to install liquid applies like paint
- Full fabric application
- Meets rigid DIN standard for anti-fracture membranes
- *Extra Heavy-Duty* Floor Service Rating

*See DS700.12 Hassle Free Lifetime Warranty for Additional Details.

LATICRETE®

Globally proven. Professionally endorsed.

LATICRETE INTERNATIONAL, INC.
1 LATICRETE PARK NORTH ▪ BETHANY, CT 06524-3423 USA
TEL: (203) 393-0010 ▪ (800) 243-4788
FAX: (203) 393-1684 ▪ FAX ON DEMAND: (800) 359-3297
www.laticrete.com • support@laticrete.com

LATICRETE MIDDLE EAST
TEL: (971) 4-286-2627 FAX: (971) 4-286-2123
LATICRETE ASIA PACIFIC
TEL: (65) 262-4237 FAX: (65) 262-3701
LATICRETE EUROPE
TEL: (39) 0585-856-159 FAX: (39) 0585-856-160
LATICRETE LATIN AMERICA
TEL: (203) 393-0010, EXT. 218 FAX: (203) 393-1684



For an actual sample of these membranes absolutely FREE call 800-243-4788, Ext. 265.

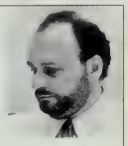
Please specifiy 9235 / Blue 92 Swatch Card

© 2000 LATICRETE INTERNATIONAL, INC. ® TM Reg U.S. & Foreign Pat. Office

CIRCLE 74 ON INQUIRY CARD

MECHANICAL

Plumbing fixtures • Heating, ventilating & air-conditioning equipment • Fittings, trim & accessories • Air-handling fans



THE FANS FROM MODERN FAN ADD MUCH-NEEDED STYLISTIC CHOICES TO AN ITEM THAT IS OFTEN TOO FUNCTIONAL OR TOO TRADITIONAL-LOOKING. —*John Amatruda*

Water and leaf

Archetypal forms such as the water droplet and the leaf inspired Massimo Iosa Ghini in his designs for Giorno, as shown in the flowing fittings of the bathroom series. 800/774-1181. Dornbracht, Duluth, Ga. 888/DURAVIT. Hoesch/Duravit, Duluth, Ga. CIRCLE 340

Industrial fan

The Industry Fan's unornamented forms evoke the industrial age. Its raw finishes are designed to blend in with exposed ceilings. The fan functions as an environmentally sensitive choice for comfort control—at full speed it uses less than one amp of power. 888/588-3267. The Modern Fan Co., Ashland, Ore. CIRCLE 341

Clean breathing

The Hunter HEPAtech 250 with high-performance ionizer can remove particles as small as .1 micron and is CADR rated to clean an 18-by-20-foot room. 800/4-HUNTER. Hunter Fan, Memphis. CIRCLE 342

Even flow

The Axor Terrano single-lever lavatory faucet's ceramic mixing cartridge offers quiet operation, while Hansgrohe's integrated aerator aerates the water stream without use of a mesh screen. 800/719-1000. Hansgrohe, Alpharetta, Ga. CIRCLE 343

Someone's in the kitchen

Durable stainless steel teams up with a fully accessorized Platinum Series sink, seamless counter, and wraparound raised edge to create an integrated preparation and clean-up system. 800/451-5782. Blanco, Cinnaminson, N.J. CIRCLE 344

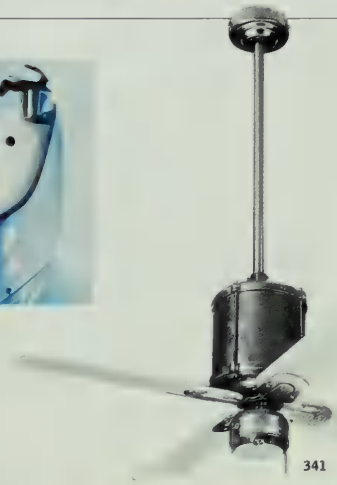
A sink that resonates

The Infinite Fitting Basin, originally designed by Bruce Tomb in 1984 as a sculptural piece, comes in sand-cast white bronze, silicon bronze, brass, or aluminum. 415/970-9210. Infinite Fitting, San Francisco. CIRCLE 345



340





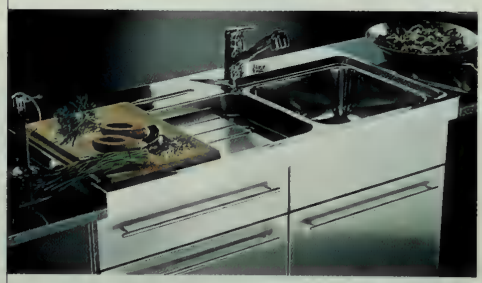
341



343



342



344



345

MECHANICAL

Plumbing fixtures • Heating, ventilating & air-conditioning equipment • Fittings, trim & accessories • Air-handling fans

Brilliant basins

Watercolors basins turn superannealed glass into brilliantly colored, durable, usable sinks. 310/815-4785. Colorwash, Los Angeles. **CIRCLE 346**

Don't call it a comeback

Kallista plumbing design introduces the Michael S. Smith Collection of vintage and classically inspired bathroom fixtures. 888/4-KALLISTA. Kallista, Kohler, Wis. **CIRCLE 347**

The least favorite chore

TOTO's SanaGloss protective glaze seals ceramics with an ionized barrier that prevents particle adherence. 800/350-8686. TOTO, Morrow, Ga. **CIRCLE 348**

Clean filters

E-Series RIAG-FLO/PH peripheral header air filters offer rigid filtration in an environmentally friendly design. The filter's nonmetallic components allow it to operate in humid conditions without rusting, corroding, or degrading. 800/333-7320. Camfil Farr, Los Angeles. **CIRCLE 349**

Cast-iron sinks

Dolce Vita cast-iron above-counter lavatories can be installed self-rimming or wall-mounted using Kohler's wrought-iron bracket, thus providing an array of design options. 800/4-KOHLER. Kohler, Kohler, Wis. **CIRCLE 350**

Don't worry, spec Happy

Designed by Sieger Design, the Happy D pedestal basin/console from Duravit features generous proportions and a broad deck. The lavatories are available in a 29½-inch or 25½-inch size, both with a full pedestal or siphon cover. 888/DURAVIT. Hoesch/Duravit, Duluth, Ga. **CIRCLE 351**

Shower power

New Generation Aktiva A8 handshowers boast streamlined showerhead and handshower designs, various advanced spray modes, and built-in cleaning functions. 800/719-1000. Hansgrohe, Alpharetta, Ga. **CIRCLE 352**

Below decks

The stainless-steel Grand Triple and Combination Max undermount sinks are unconventionally located below the counter for a European look. 705/526-5427. Kindred Industries, Midland, Ont. **CIRCLE 353**



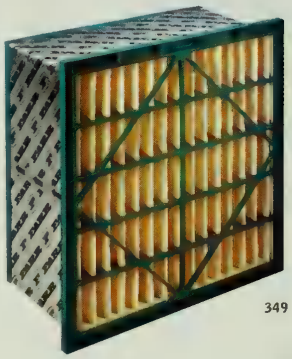
347



346



350



349



348



352



351

353





WHY

LAS VEGAS HILTON'S SPACE QUEST CASINO RELIES ON SLOAN FAUCETS AND FLUSHOMETERS

When you're transported to the 24th century, manual flush valves and faucets just won't do.

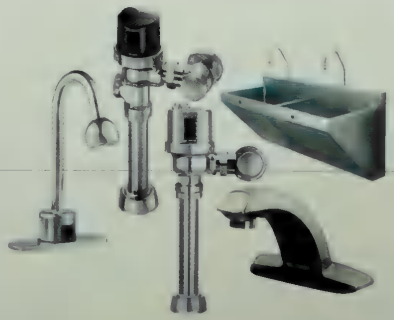
The Las Vegas Hilton's Space Quest Casino needed fixtures to reflect that modern technology. They chose SLOAN'S ADA compliant Optima Plus® Flushometers and Optima® ETF-80 faucets for their restrooms to add style without sacrificing performance.
The recently opened entertainment center chose Sloan Optima Plus Flushometers to integrate time-tested hydromechanics and modern electronics. Sloan's Perfect Sense® EL-1500 Optima sensor utilizes advanced electronics that adjust automatically to surroundings and changing conditions. Sloan's Optima Plus Flushometers have their own LED diagnostics. The Optima's Sentinel® system is electronically programmed to automatically flush after 24 hours of non-use, ensuring fresher restrooms and reducing corrosive buildup.

Sloan blends state-of-the-art electronics, timeless craftmanship and styling in Hilton's ultra-modern restroom to orchestrate both form and function.

For example, Sloan's Optima ETF-80 hygienic and automatic faucets use infrared technology to sense a user's hands and automatically adjust to changing environments. Plus, the new sleek, sophisticated design and contemporary styling elevates the standard for elegance.

IF THE 24th CENTURY RELIES ON SLOAN, SHOULDN'T YOU?...Call today!

Learn why entertainment centers choose the performance of Sloan. Call **800-745-0800,** or circle the number below for a copy of our full-line catalog/CD-ROM.



SLOAN®

Sloan Valve Company
10500 Seymour Avenue • Franklin Park, IL 60131
Phone: 800-745-0800 • Fax: 800-447-8329
www.sloanvalve.com

CIRCLE 75 ON INQUIRY CARD


LINES LIKE THESE DON'T JUST HAPPEN. THEY'RE CRAFTED.
Is a change this big an evolution, or a revolution? New Wiremold Profile Series™ is the first raceway to combine high capacity and a future-ready platform with a sleek appearance. It's going to change the way you look at your building's design. For more information, call 1-800-621-0049 or visit www.wiremold.com
CIRCLE 76 ON INQUIRY CARD
WIREMOLD
Perimeter
Overhead
Infloor
Open Space
Structured Cabling

ELECTRICAL

Raceways & boxes • Lighting • Interior & exterior luminaires • Emergency lighting • Lamps • Telephone & intercommunication equipment



THE NEW TECHNOLOGIES IN LIGHTING ARE RESULTING IN FIXTURES THAT ARE SMALLER AND MORE STREAMLINED. *—Terese Wilson*

Technologically advanced
Zumtobel Staff introduces Orea, Spheros 75, and Miros (shown clockwise from top left). Orea directs light with its waveguide lens housed in a floating design. Spheros 75 encloses a maximum output T5 lamp in a slim profile casing. Miros is a projector-mirror lighting system designed to flood a room with light, without revealing its source. 800/932-0633. Zumtobel Staff Lighting, Highland, N.Y. CIRCLE 354

Contemporary craft
The Birds combine modern, functional design with old-world craftsmanship, as each unit is handblown using the centuries-old *incalmo* process. 206/363-9323. Resolute, Seattle. CIRCLE 355

Live long and prosper
Combining white light, a 100,000-hour life, and a high lumen package, the 165-watt QL Induction Lighting System provides a viable option for industrial, commercial, and outdoor environments. 800/555-0050. Philips Lighting Company, Somerset, N.J. CIRCLE 356

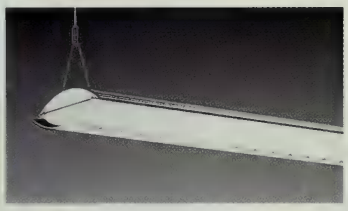
Lighting span
The Bridge Cable System is a line voltage system that can connect to ceilings or walls. It incorporates a variety of halo and spot-light options. 203/407-8000. Nemo Italianaluce, Hamden, Conn. CIRCLE 357

Flexible street lamps
Using a system of field-interchangeable segmented reflectors, the Boulevard Series provides a flexible system for lighting roadways and parking lots. 770/922-9000. Lithonia Lighting, Conyers, Ga. CIRCLE 358

Hit the right note
A combination of line and low-voltage units, the Light Notes Series incorporates lamp intensities ranging from 20-watt MR16 to 250-watt PAR38. The series is available in a variety of finishes. 800/999-9574. Lighting Services Inc., Stony Point, N.Y. CIRCLE 359

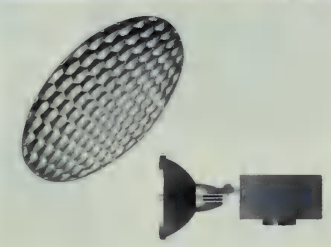


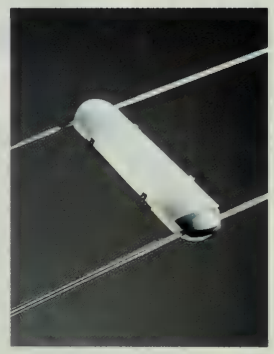
354



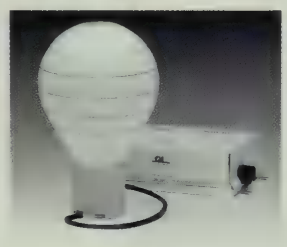


355

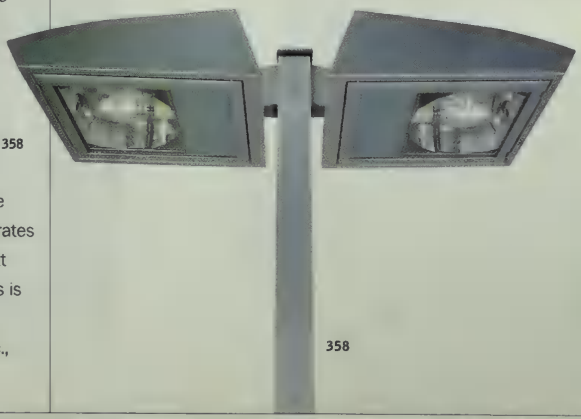




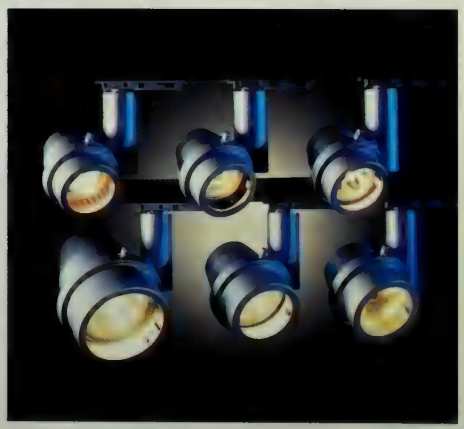
357



356



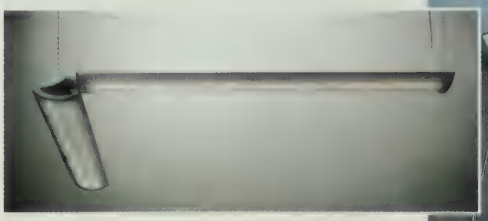
358

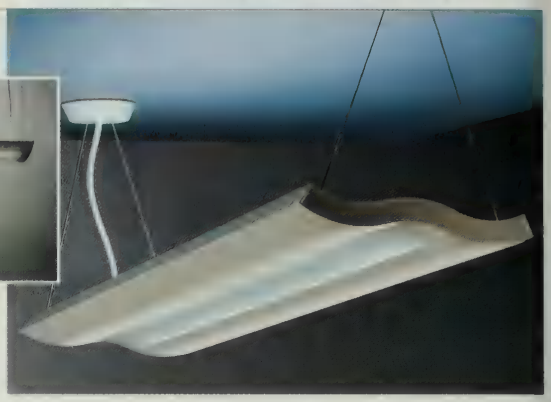


359

Modular fixtures

The Megan and the Eos systems use T5 lamp technology housed in perforated steel and extruded aluminum, respectively, both coated with a polyester powder finish. A variety of connectors and sizes complete these modular systems. 631/694-9292. Artemide Inc., Farmingdale, N.Y. **CIRCLE 360**

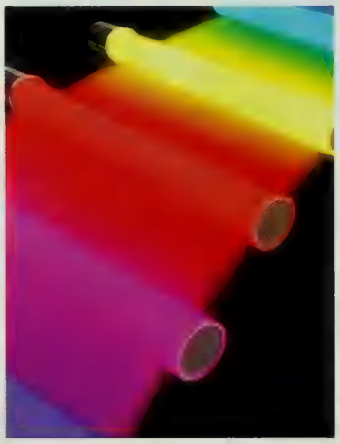




360

Color wand

Suited for indoor or outdoor applications, the LED-based Color Change Luminaire, housed in the TIR Light Pole, can exhibit an unlimited mix of colors and color sequences, governed by a standard DMX control board. 800/663-2036. TIR Systems Ltd., Vancouver. **CIRCLE 361**



361

Woven fiber optics

Allsteel integrates AMP Netconnect fiber-optic cabling into its furniture panel systems to create a flexible and economic solution to cabling infrastructure for work environments. 319/262-4800. Allsteel Inc., Muscatine, Iowa. **CIRCLE 362**



362

Lighting design software

ColorPlay is a lighting-design software package that provides a user-friendly graphic interface for creating lighting shows with Color Kinetics digital color-changing lights. 888/FULL RGB. Color Kinetics Inc., Boston. **CIRCLE 363**

Smart color

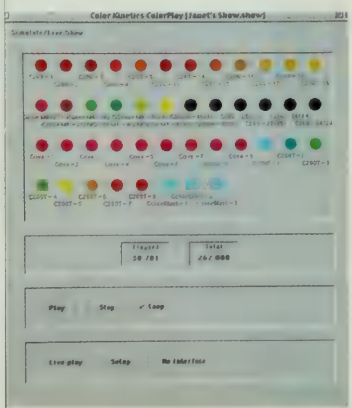
The Colorblast digital lighting fixture uses Chromacore technology to wash interior and exterior walls with changing color, all controlled by microprocessor-equipped LEDs. 888/FULL RBG. Color Kinetics Inc., Boston. **CIRCLE 364**



364

Custom outdoor lighting

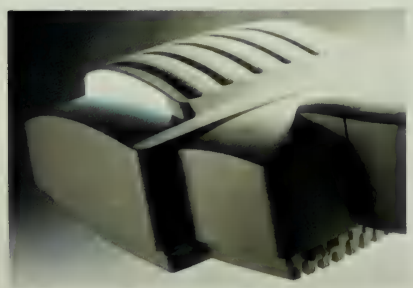
Designed by Perry Romano, the Design PDM Paradigm is an outdoor and roadway lighting fixture in aluminum with a polyester powdercoat finish. The fixture incorporates Optical Edgeglow windows that can be customized with color effects. 847/451-0040. Quality Lighting, Franklin Park, Ill. **CIRCLE 365**



363

Rotating bollard

Designed by Karsten Winkels, Ponte is a landscape lighting bollard that rotates a full 360 degrees and accepts a 35-watt PAR30 or a 24-watt HO/T5 lamp for uplighting or pathway lighting. 704/471-2211. Hessamerica, Shelby, N.C. **CIRCLE 366**

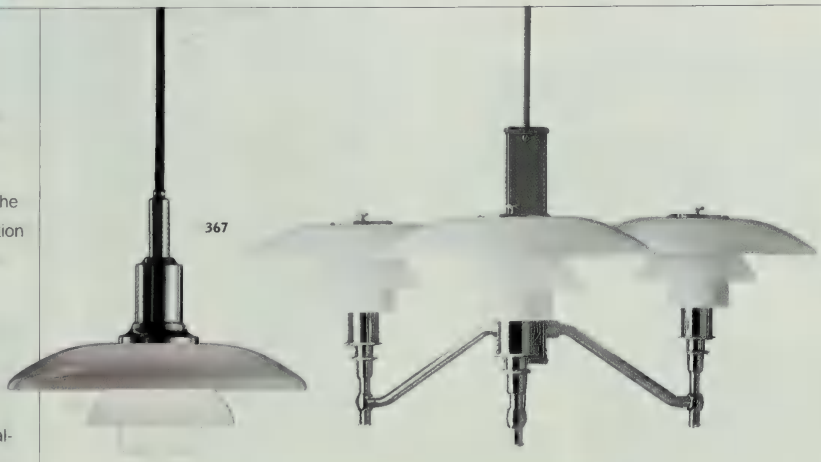


365



366

Theme and variation
In conjunction with Louis Poulsen Lighting in 1927, Danish designer Poul Henningsen created the PH 3/2 glass pendant, made of handblown glass shades and detailed chrome fittings. The PH 3/2 Academy chandelier is a variation on this Henningsen original. 954/349-2525. Louis Poulsen Lighting, Ft. Lauderdale, Fla. CIRCLE 367



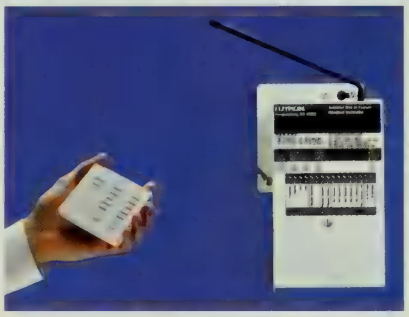
367

Hub for the home
Resi-Link Home Structured Wiring System is an adjustable and expandable modular solution to centralized wiring distributions in residential applications, including telephone, CATV, video, and Internet wiring. 901/252-5000. Thomas & Betts Corporation, Memphis. CIRCLE 368



368

No strings attached
Intended for commercial applications, RadioTouch offers wireless remote control of a room's multizone lighting system, including audiovisual equipment and motorized window shades. 800/523-9466. Lutron Electronics Co. Inc., Coopersburg, Pa. CIRCLE 369

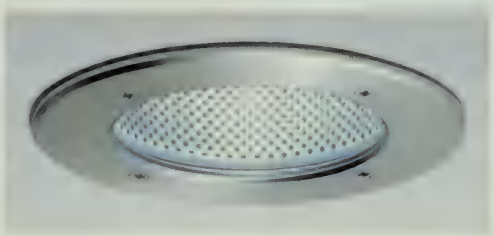


369



370

Durable reflector
Prescolite introduces the American Matte Reflector, a low-maintenance reflector that offers a uniform brightness in a durable surface finish that maintains a consistent appearance. 510/562-3500. Prescolite, San Leandro, Calif. CIRCLE 370



371

Weatherproof luminaires
Fully enclosed under tempered glass, the recessed stainless-steel luminaires from BEGA/US are intended for wet locations. The luminaires use either Ceramic Metal Halide or Tungsten Halogen PAR20, 30, and 38 lamps wrapped in a perforated stainless-steel internal baffle. 805/684-0533. BEGA/US, Carpinteria, Calif. CIRCLE 371

Outdoor delight
Louis Poulsen Lighting enlisted the Danish designer Alfred Homann to create a series of simple and functional exterior luminaires, including the Kipp wall and Kipp bollard, both available in a variety of finishes and lamp options. 954/349-2525. Louis Poulsen Lighting, Ft. Lauderdale, Fla. CIRCLE 372





372

ELECTRICAL

Raceways & boxes • Lighting • Interior & exterior luminaires • Emergency lighting • Lamps

Inventive assemblage

Claimed to be the first symmetric recessed indirect fixture, the Sky luminaire features four fluorescent lamps embedded in a contoured reflector design. The Verve is a cantilevered, wall-mounted fixture of extruded aluminum; it distributes light using an asymmetric optical assemblage. 773/247-9494. Focal Point, Chicago. **CIRCLE 373**

Integrated system

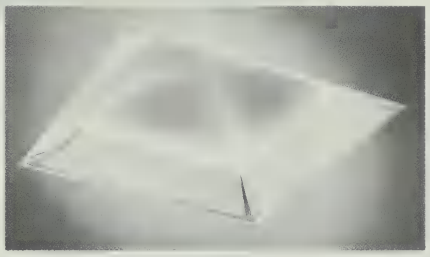
Designed by professional lighting designer Ron Harwood, the Smarthead track-lighting system combines projectors and spotlights with a wide range of lamping options and optical accessories. 714/957-6101. Targetti, Santa Ana, Calif. **CIRCLE 374**

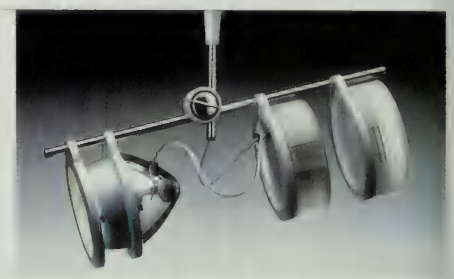
Surface element

The SLP4 recessed wall luminaire fits flush with interior walls and provides a vertical element of light using a single MR16 lamp or high-output LED color-changing light source. 800/663-2036. TIR Systems Ltd., Vancouver. **CIRCLE 375**

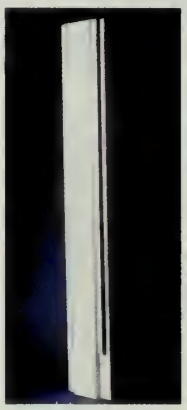


373





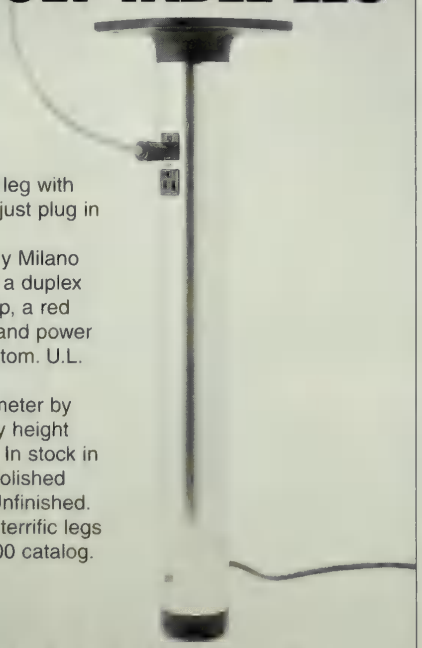
374



375

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

110 VOLT TABLE LEG



The only table leg with power built in; just plug in and go!

To our trendy Milano Leg we added a duplex outlet at the top, a red indicator light and power cord at the bottom. U.L. Listed.

It's 3¼" diameter by 27" overall; any height can be made. In stock in Matte Black, Polished Chrome and Unfinished.

Many other terrific legs in our new 2000 catalog.

Doug Mockett & Company, Inc.

"Fine Architectural Hardware for Your Fine Furniture"®

Box 3333 • Manhattan Beach, CA 90266 USA

Tel: 310-318-2491 • FAX: 310-376-7650

Visit us on the Internet at www.mockett.com

CIRCLE 77 ON INQUIRY CARD

WHAT WAS THE POLSHEK PARTNERSHIP THINKING?

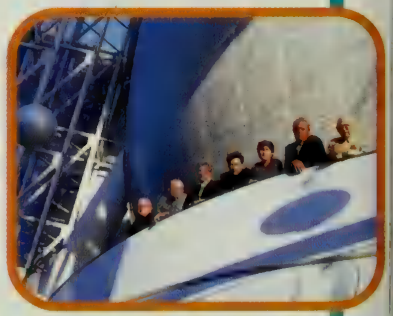
For an

out-of-this world

look inside the designers

of the Rose Planetarium

and more ...



CLICK

INTERVIEWS

ON

WWW.architecturalrecord.com

Revealing insights, ideas and inspiration from POLSHEK PARTNERSHIP, FRANK GEHRY, RICARDO LEGORRETA, SANTIAGO CALATRAVA and more ... *are just a click away.*

Don't miss a word. Find the complete text from exclusive *Record* interviews with leading architectural visionaries, plus profiles of intriguing artists and designers from a variety of media.

INTERVIEWS SPONSORED BY revit

ARCHITECTURAL RECORD

McGraw Hill Construction Information Group

A Division of The McGraw-Hill Companies

Bending geometries

Named for the bendable nature of its track, Flex 12 is a low-voltage track-lighting system that offers a variety of geometric fixtures. 847/827-9880. Juno Lighting Inc., Des Plaines, Ill. CIRCLE 376

Emergency reliability

Suitable for indoors or outdoors, the Weathergard 626 emergency lighting is a low-profile fixture that includes a halogen spot in a durable polycarbonate shell. 203/575-2044. High-Lites Inc., Waterbury, Conn. CIRCLE 377

Options expanded

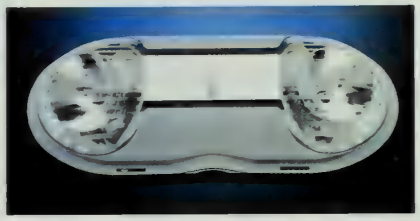
The newly expanded series of HID Multi-5 ballasts now includes metal-halide and high-pressure sodium designs in a range of wattage. 800/BALLAST. MagnaTek Lighting Products, Nashville. CIRCLE 378

Compact color

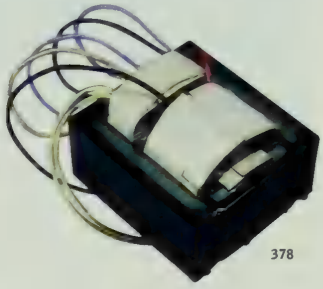
The EC2 is a compact and economical exterior wash luminaire with color mixing, programmable effects, and remote operation. 512/836-2242. Lightwave Research, Austin, Tex. CIRCLE 379



376



377



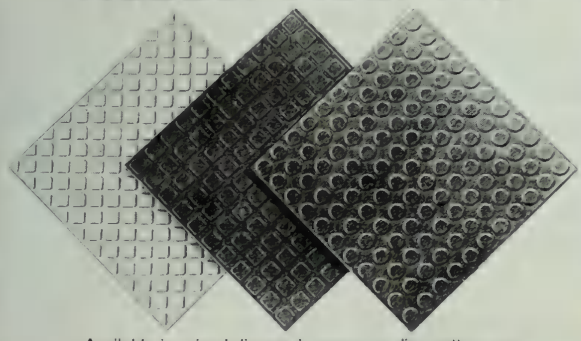
378



379

MUSSON

Raised Design Rubber Floor Tile



- Available in raised diamond, square or disc pattern surface designs.
- Made of thick, durable, non-slip, flame resistant solid rubber in plain or marbleized texture, factory cut 24"x24".
- Matching stair treads and coved risers complete your flooring system choosing from an array of decorator colors.

For free brochure and samples, contact

MUSSON RUBBER CO.

P.O. Box 7038 ▪ Akron, OH 44306 ▪ Fax (330) 773-3254

800-321-2381 ▪ E-mail info@mussonrubber.com • www.mussonrubber.com

CIRCLE 78 ON INQUIRY CARD

REQUIRED

MARKETING PARTNERS FOR ARCHITECTURAL CAD SERVICES

Enlink Infotech (P) Ltd., is the IT wing of a US$40 million Indian business group. Enlink is the pioneer in establishing On-line IT Enabled Services in India.

Our infrastructure includes 35000 sqft. modern facility with high-speed data link, conference rooms, libraries and in-house training.

We excel in Architectural services (2D & 3D CAD drawing conversions) as per the specific needs of the customer.

We have a fully qualified team of professional graduate architects, having a wide and extensive experience on Autocad, Pro-e, and other software packages for Computer Aided Design.

We are looking for Marketing partners having a strong sales force and an excellent contact in various architectural firms all over USA. We offer lucrative commission benefits.

Those interested may please send their company profile at the following address:

ENLINK INFOTECH
PRIVATE LIMITED

E - 16, Everest, Tardeo Road,Mumbai - 400034,India.
Fax : +91 22 4965047.
e-mail : **enlinkit@vsnl.net** website : **www.enlinkit.com**
Contact Person : Mr. Vineet Jain.

ubiquitas@vsnl.com

CIRCLE 79 ON INQUIRY CARD

THE AMERICAN INSTITUTE OF ARCHITECTS
2001 NATIONAL CONVENTION AND EXPO

SAVE THE DATE





LEADERS AND PARTNERS IN CREATING COMMUNITY

- Visit www.aiaconvention2001.com for complete up-to-the-minute convention information and to register online.
- Earn 18 hours/LUs in just four days to fulfill AIA membership requirements, including many that qualify for HSW and state licensure.
- Access to over 600 leading-edge companies showcasing products and services for the design and construction industry all under one roof!
- Explore Denver, the Mile-High City, with its unique mountain location and award winning architecture.

CONVENTION
AIA
EXPO 2001
DENVER

May 17-19, 2001
Colorado Convention Center

For more information contact
AIA Convention Hotline: 202-626-7395
Fax: 617-859-4354
Email: aiaexpo@hhcc.com

DESIGN COMPETITION

UNITED STATES MARINE CORPS HERITAGE CENTER

The United States Marine Corps announces a juried Design Competition to select a team that will plan the museum component to the U. S. Marine Corps Heritage Center in Quantico, Virginia. The design team must have the vision and the commitment to make this an architecturally distinctive structure, the first phase of a planned campus of facilities. The innovative, signature museum will herald the history of the United States through the eyes of Marines. A one hundred and thirty five acre parcel of land has been selected as the site. Located adjacent to Interstate 95, the United States Marine Corps Heritage Center is foreseen as a significant visitor's destination.

For competition information, log on to: usmcheritagecenter.efaches.navfac.navy.mil

CIRCLE 89 ON INQUIRY CARD

Dates & Events

Calendar

Skyscrapers: The New Millennium
Chicago, Ill.
August 19–January 15, 2001
Sponsored by the Art Institute of Chicago, this exhibit examines more than 70 high-rises either recently completed or in construction. The exhibit includes the Jin Mao Building by SOM, the Sony Center by Helmut Jahn, and some of the latest green skyscrapers by Sir Norman Foster, Ken Yeang, and others. See www.artic.edu.

Wood: An American Tradition
Washington, D.C.
September 9–April 22, 2001
The National Building Museum is hosting an exhibition exploring the important and varied role of wood in American architecture. For information call 202/272-2448 or see www.nbm.org.

Architect of Form and Spirit: Eric Mendelsohn in Saint Louis
St. Louis
September 17–March 10, 2001
A major exhibit highlighting the life and work of German architect Eric Mendelsohn, designer of COCA's current home, where the exhibit will be. Call 314/725-6555; or get more information on the Web at www.cocastl. org.

Edoardo Gellner and Carlo Scarpa: The Church of Core de Cadore
Venice
October 5–December 22
This exhibition explores the history and relevance of the church and the village where it is located. Call 041/710025-2571012, write archivioprogetti@iuav.it, or see http:// oberon.iuav.it.

How Architecture of the '70s Shapes Buildings of Today Harvard and Cornell Universities
October 17–April 24, 2001
This lecture series includes Rem Koolhaas, Rafael Moneo, Jorge Silvetti, Sara Whiting, Alan Colquhoun, and Felicity Scott. Free of charge. Call 617/495-2337 or see www.gsd.harvard.edu /events.

Light, Life, Libeskind: A Look at the New Jewish Museum San Francisco
October 26–January 28, 2001
The Jewish Museum of San Francisco is presenting an exhibition of Libeskind's drawings, computer renderings, and models of its new facility. For information call 415/591-8800; or write info@jmsf.org.

Monuments, Mills and Missile Sites
Washington, D.C.
October 26–April 29, 2001
This exhibit explores 30 years of the Historical American Engineering Record (HAER), which documents historically significant engineering and industrial works throughout the United States. At the National Building Museum, call 202/272-2448 or go to www.nbm.org

Art Is Work: A Milton Glaser Retrospective
New York City
November 2–December 8
The largest retrospective ever held in New York on the work of this well-known American graphic designer. AIGA's Fifth Avenue gallery. 212/807-1990, www.aiga.org.

Jewels in the Crown: The Architecture of the Savannah Plan
Washington, D.C.
November 10–January 5, 2001
Savannah, Ga., is acclaimed as one of America's most vibrant small cities. This exhibit illustrates the architectural and cultural approach taken in creating this successful urban experience. At the Octagon, call 202/626-7387.

Architectural Competitions in America
New York City
November 10–January 6, 2001
This traveling exhibition at two New York galleries reviews the legacy and utility of competitions as important historical phenomena resulting in some of the most significant built works. For information contact Jessica Lavin, 718/636–3517; jlavin@kmwarch.com.

Architectural Competitions in America
Pratt Institute, Brooklyn
November 11–January 6, 2001
An analysis of the role of competitions in the evolution of American architecture, researched and curated by Tobias Guggenheimer, former professor in the School of Architecture. Contact 718/636-3517.

Flight Patterns
Los Angeles
November 12–February 11, 2001
This exhibit explores the landscape, urbanism, and relationship of cities to land in geographic areas of the Pacific Rim. At the Geffen Contemporary at MOCA. Contact 213/626-6222 or go to moca.org.

Downsview Park Design Competition Exhibit/Critique
New York City
November 13–December 21
On display are models and drawings by finalists of this 320-acre park in Toronto; a forum of leading critics and commentators rounds out the program. The exhibit is at the Van Alen Institute. Contact 212/924-7000; www. vanalen.org.

Moguls and Monuments
November 14–May 15, 2001
The Municipal Art Society of New York presents this illustrated lecture series on how the superrich built four of New York City's great buildings. Lectures include the Guggenheim Museum (Nov. 14), the Woolworth Building (Jan. 23, 2001), the Chrysler Building (March 13, 2001), and Rockefeller Center (May 15, 2001). For information call 212/840-1840.

Dreams and Disillusion: Karel Teige and the Czech Avant-Garde
Miami Beach, Fla.
November 15–April 1, 2001
The Wolfsonian-Florida International University presents the first U.S. exhibition on Karel Teige, the graphic designer, architectural theorist, and important proponent of the European avant-garde. For information call 305/531-1001.

Cities in Motion
Montreal
November 15–April 1, 2001
Three exhibitions united around the theme of cities illustrate how modern transportation systems have changed the fabric and scale of cities over the past century. At the Canadian Centre for Architecture, 514/939-7000; icloutier@cca.qc.ca.

AIA Students' Forum 2000 Conference
Los Angeles
December 27–January 2, 2001
The AIA's annual conference provides students with the opportunity to learn about issues concerning architectural education and the profession. The conference includes speakers, lectures, tours, and seminars. For information, visit www.aiasforum2000.com or contact Ann Marie Teheny at amtaheny@ aol.com.

Dates & Events

On the Job: Design and the American Office
Washington, D.C.
November 18–June 24, 2001
This major exhibition documents the American office as an architectural and social space, a dynamic environment whose significance extends beyond physical boundaries. National Building Museum. Call 202/272-2448 or see www.nbm.org.

The Future of Design
Toronto
January 18–21, 2001
A conference of design insight, provocative exhibitions, far-out features, and product launches by 300 stellar designers, manufacturers, and retailers. For more information, 416/599-8885 or see interiordesignshow.com.

How to Maximize Resources and Efficiency Through Internet Applications
Scottsdale, Arizona
January 30–February 1, 2001
Hear the best practice studies on implementing e-business initiatives from some of the leading construction, hardware, software, design, and supply firms. To view agenda or register online see www.iqpc.com/INHP-TT/construction, call Christaan Hanson at 312/980-3410, or email christiaan.hanson@iqpc.com.

Cities in the Third Millennium
Melbourne, Australia
Feburary 26–March 2, 2001
The Sixth World Congress of the Council on Tall Buildings and Urban Habitat will feature more than 80 local and international speakers and a large exhibit. Call 613/9682 0244; or see www.icms.com.au/tbuh.

The Architecture of R.M. Schindler
MOCA at California Plaza, Los Angeles
February 25–June 3, 2001
First major survey of this century's most innovative Vienna-born Modernist. For information call 213/626-6222 or see www.MOCA-LA.org

National Trust Study Tours
The year 2001
Led by esteemed study leaders, local guides, and guest lecturers, this series of 85 tours under the auspices of the National Trust provides something for everyone. To receive a free copy of the 68-page guide, contact 800/944-6847 or tours@nthp.org.



CIRCLE 81 ON INQUIRY CARD

Competitions

Competition for Community Centers of the Future
Deadline: December 13
The Danish Foundation for Culture and Sports Facilities invites entries for the design of community centers. The winner will be awarded a cash prize and the design of three community centers in Denmark. For information call +45-32-83-69-01, write konkurrencer@dal-aa.dk, or download information from the Web at www.dal-aa.dk.

Business Week/Arch Record Awards
Call for Entry: January 1, 2001
Look for the insert in RECORD'S January issue announcing this award for public and private projects completed anywhere since January 1, 1998. Visit www.aia.org; or www.archrecord.com or call toll free 888/242-4240; in the U.S. 202/626-7463.

The Rotch Traveling Scholarship
Application due: January 1, 2001
This prestigious scholarship, awarded to the winner of a two-stage design competition, covers eight months of travel throughout the world. Requests for applications must be submitted in

COOL THINGS YOU WON'T WANT TO MISS!

Log on for the Greatest Hits on

Architecturalrecord.com



The Rose Center for Earth and Space

Reading our coverage of the Rose Center is better than visiting the building itself: early design sketches, archival precedents, technological details, notes on the terrace, and an exclusive interview with architect James Stewart Polshek and his partners.
http://www.architecturalrecord.com/PROJECTS/AUG00/ROSE/ROSE1.ASP



Georges Restaurant

The simplicity of Georges, the new restaurant on top of Paris' Centre Pompidou, belies the computer process that created it. See a computer animation of the process that rendered these strange forms, photos of their construction, and meet one of the designers.
http://www.architecturalrecord.com/PROJECTS/SEPT00/PEOPLE/GEORGES.ASP



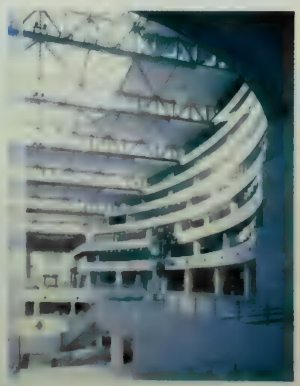
The New 42nd Street Studios

The Times Square area is defined by light and movement, and we inaugurate our new lighting section with a building that captures both light and movement. See two streaming videos of the changing theatrical lights on the façade of this rehearsal studio.
http://www.architecturalrecord.com/LIGHTING/NOV00/PEOPLE/MILITELLO.ASP



The South Carolina Aquarium

Architecturalrecord.com sets a new standard for showing a building project online with our innovative interactive floor plan. Click on arrows scattered on the plan, and see a photo of the view from that spot.
http://www.architecturalrecord.com/PROJECTS/OCT00/AQUARIUM/AQUARIUM1.ASP



The *Business Week*/ *Architectural Record* Awards

Each year, *Architectural Record*, *Business Week* and the American Institute of Architects present awards for business design. On Architecturalrecord.com, you will find not only information about and pictures of the ten winners, but also of 11 other finalists.
http://www.architecturalrecord.com/BUS_WEEK/BUS_WEEK.ASP

writing to: Rotch Travelling Scholarship, 52 Broad Street, Boston, Mass. 02109.

NEA's Grants for New Public Works

Deadline for letters of interest: January 11, 2001

As part of an effort to invest in projects that promote livable communities, the NEA will fund a limited number of design competitions to stimulate excellence in design in the public realm. Though NEA is especially interested in landscape design, competitions include architecture, planning, graphics, and industrial design. Call 202/682-5452 or go to www.arts.gov.

Competition for Seaside Landmark

Deadline for entries: January 23, 2001

The Town of Seaside and the Seaside Institute are sponsoring a competition to design a landmark to greet visitors and commemorate the 20th anniversary of the community's founding. This idea-based competition is open to architects who have designed buildings at Seaside in the past, talented young architects, students of architecture, and even homeowners and children. For entry forms call 850/231-2226, or see www.seasidefl.com.

The 11th Annual James Beard Foundation Awards

Deadline for restaurant and graphic design entries: January 31, 2001

The award honors culinary-related talent, including restaurant designers of projects in the United States and Canada. Entry forms and rules can be obtained by faxing or E-mailing requests to 212/627-1064/jbfmoller@pipeline.com or 212/645-3654/dpadmore@myoungcom.com. Forms can be downloaded from jamesbeard.org.

Dupont Benedictus and ACSA Student Design Competition

Deadline for registration: February 1, 2001

Deadline for receipt of entries: March 8, 2001

This year, DuPont and the Association of Collegiate Schools of Architecture (ACSA) present the challenge of designing a multipurpose entertainment retail facility, while exploring the uses of laminated glass. For further information see www.acsa-arch.org, call 202/785-2324 or E-mail hbatliboi@acsa-arch.org.

E-mail calendar events and competitions to ingrid_whitehead@mcgraw-hill.com at least two months ahead of event date.



Build award winning facilities that are cost efficient & distinctive.

Reinforced concrete gives you decisive advantages lower costs . . . cash flow savings . . . shorter completion schedules . . . cast-in-place flexibility for unusual, dramatic shapes . . . durability . . . natural, aesthetically-pleasing finish . . . greater fire-resistance . . . thermal mass advantages . . . and reinforced concrete allows architects to be creative.

Build award winning facilities for institutional, commercial, educational, residential or healthcare, *reinforced concrete is the cost-effective, creative solution.*

Find out more about award winning design using reinforced concrete . . . phone, fax or e-mail for the *2000 Design Awards Brochure* from CRSI.



CRSI

Concrete Reinforcing Steel Institute
933 N. Plum Grove Road
Schaumburg, Illinois 60173-4758
847/517-1200 Fax: 847/517-1206
Website: www.crsi.org E-mail: info@crsi.org

© 2000 CRSI

CIRCLE 82 ON INQUIRY CARD



eProject Lead Manager. The most constructive way to manage the entire sales process.

Building on the power of the F.W. Dodge project news service, eProject Lead Manager combines extensive project news content with the interactivity to mobilize your team to action at any point in the bidding process.

With eProject Lead Manager, sales leads, customer relationships and market information can be tracked and managed with the speed, flexibility and security you need to keep the leads coming, the internal dialogue flowing and the sales process moving. Sort, track and compare leads. Develop sales strategies. Add notes and tasks, update project status and much more. Day and night, from anywhere. At the speed of the Internet. With no new technology required.

Visit www.construction.com

To see for yourself how eProject Lead Manager can help you manage your products and services more productively, visit construction.com for a brief overview, or call 1-800-FW DODGE.

F.W.DODGE
McGraw-Hill Construction Information Group

The Most Comprehensive, Most Accurate, Most Used Source of Construction Information.

CIRCLE 83 ON INQUIRY CARD

A Division of The McGraw-Hill Co

ANSWERS

Questions appear on page 157. To receive CES credits, fill in the education reporting form below or on our Web site (www.architecturalrecord.com).

1. The conclusions were threefold: First, there is a security threat in both public and private sectors, although the threat is more defined in government facilities. Second, no building is truly secure because as security technology advances, so does terrorist technology. Third, it is best to use the security tools available because a more secure building is less likely to be targeted for terrorism.

2. The premise that the physical environment can be altered to reduce the incidence of crime is based on four elements: territoriality, natural surveillance, activity support, and access control. These designs create distance between buildings and streets, enhance lighting, and control the access of people into the buildings. Environmental design measures are usually effective only when the threat of massive destruction and loss of life is not present.

3. Personnel access can be controlled electronically by requiring a personal identification number, credentials such as an access card, or biometrics to identify the individual requesting access.

4. The lobby is the focal point for access to a building. The number of security/reception desks must be kept to a minimum in order to maintain effective control and allow a natural flow of personnel. The security/reception desk should be equipped for a wide range of tasks, from providing visitor information to monitoring cameras and communication devices. For access security, the lobby must be the convergence point that all stairwells empty into, ensuring that no one can gain access to the facility without passing through the screening point.

5. Schools need to provide for security while maintaining an open and nurturing environment. To achieve these often contradictory goals, many schools are installing CCTV systems to record activities in key locations. Another important strategy is minimizing the number of entrances to the facility, making it easier to monitor incoming and outgoing traffic without forcing students to walk long distances to their classrooms. The most contentious issue in schools is keeping weapons out. Metal detectors are used in many schools, and this requires design to support the technology.

AIA/CES EDUCATION REPORTING FORM

(Use to report learning unit hours earned for architectural record only.)

Member information:

Last Name **First Name** **Middle Initial or Name**

AIA ID Number

Program/project title: Architectural Record (12.00)

☐ "Maintaining Security in an Insecure World" [page 153]

Completion date (M/D/Y): _____ / _____ / _____

AIA/CES Credit: Each article or sponsored section will earn you one AIA/CES LU hour of health, safety, and welfare credit.
Fill in: ____ total LU hours.

Material resources used:
Journal article or sponsored section: This article or sponsored section addresses issues concerning the health, safety, or welfare of the public.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

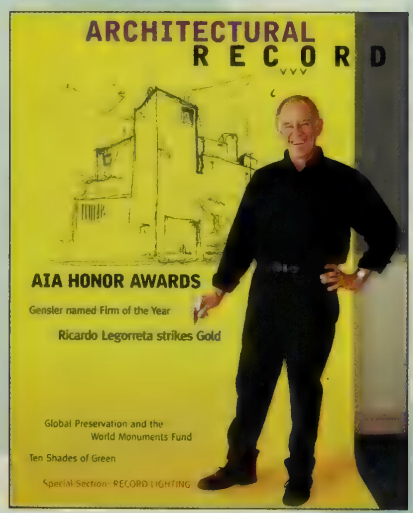
Send completed form to University of Oklahoma, Continuing Education, AIA/CES, Room B-4, 1700 Asp Avenue, Norman, OK 73072-6400; fax 405/325-6965. To respond by E-mail, visit www.architecturalrecord.com and click on Continuing Education. For more information, call 800/605-8229.

Reward your hard-working associates with a gift subscription to Architectural Record

Architectural Record is the perfect gift for new architectural professionals, colleagues, clients and staff members. Give the gift of the latest information on design ideas and trends, products, technology, and professional strategies with a subscription to *Architectural Record*. For a limited time, you can give gift subscriptions for the special low rate of $45, more than 20% off the basic rate! (U.S. only. Call for International pricing). And, additional discounts are available for multiple orders.

To take advantage of this special offer, call our Customer Service Department at 1-877-876-8093 (outside the U.S., call 609-426-7046). Or, visit our web site at **www.architecturalrecord.com** and click on the subscribe button.

We'll send the recipient a card announcing the start of the Gift Subscription.



Save 24%
off the annual basic rate

ARCHITECTURAL RECORD
McGraw-Hill Construction Information Group

Subscribe online at www.architecturalrecord.com
Or, call 1-877-876-8093 (Outside the U.S., call 609-426-7046).

New subscriptions only, please.

GD20011/GD20013/GDF20016



If You're Not on the Technology Forefront, You're Left Behind

February 12-13, 2001 • Bally's Las Vegas Hotel • Las Vegas, Nevada

The Emergent Building Technologies Conference is proud to recognize the following sponsors:

Exclusive Corporate Sponsors

- McGraw-Hill Construction Information Group
- Engineering News-Record (ENR)

Sponsoring Organizations

- The Construction Specifications Institute (CSI)
- APPA: The Association of Higher Education Facilities Officers
- National Systems Contractors Association (NSCA)

Endorsing Societies

- American Consulting Engineers Council (ACEC)
- American Institute of Architects (AIA)
- Architectural Woodwork Institute (AWI)
- Door and Hardware Institute (DHI)
- EDUCAUSE
- International Communications Industries Association (ICIA)
- National Glass Association (NGA)
- National Institute of Building Sciences (NIBS)
- Society for College and University Planning (SCUP)
- Society for Marketing Professional Services (SMPS)

Experience the Future . . . Now!

With the speed of technological change increasing minute by minute, the real challenge is to make the end product flexible, so that it can easily adopt new and emergent technologies, to extend its life, benefit its user, and expand its usefulness. The EBTC is the only educational event that focuses on this single, important issue...adaptability to rapidly changing technology. And it brings together the viewpoints and opinions of the designer, owner, supplier, constructor.

Cutting-edge Solutions

- Security
- Transport
- Glazing
- Egress
- Air quality
- Lighting
- Anti-terrorism
- Productivity

Learning Labs

Combining classroom and laboratory, this unique learning atmosphere enables you to experience the latest in network technology, integrating security, video, audio, telephony, and more. You'll see how actual situations can arise and how they are best resolved through hands-on demonstrations and reality simulations. You choose in what order and how long you stay at the Labs.

Learning Labs sponsored by:

- McGraw-Hill Construction Information Group
- National Systems Contractors Association (NSCA)
- APPA: The Association of Higher Education Facilities Officers/Siemens Building Technologies - Landis Division
- Construction Specifications Institute

Education Programs

This three-track program consists of 21 sessions based on process documentation, the future of design, and integration of people and new technology. Schedule yourself to attend as many sessions as possible.

Provocateurs - "Feature Presentations"

Hear what noted authorities in change management have to say about the future.

- Michael Joroff, senior lecturer, Urban Studies and Planning, Department of Architecture, Massachusetts Institute of Technology (MIT), Boston, MA
- Elliott Masie, president, Masie Center—The Technology & Learning Think Tank, Saratoga Springs, NY

For more information, call CSI Member/Customer Service at

(800) 689-2900

Register Online at
www.emergentbuildingtech.com

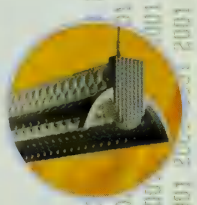
The Emergent Building Technologies Conference

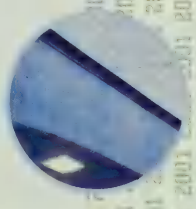
Integrating People, Technology & Design

2001

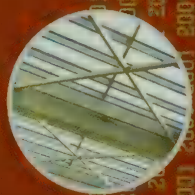
corporate profile special section







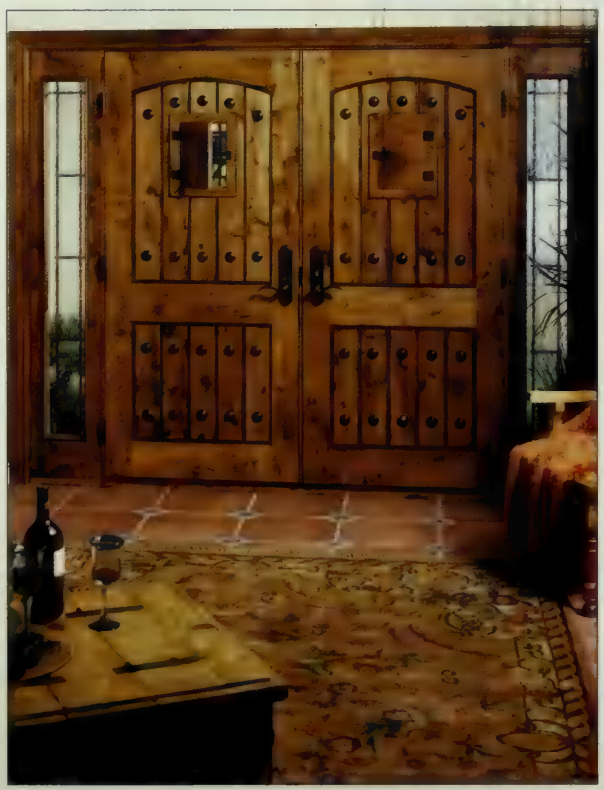




PRODUCTS ARE INTEGRAL TO THE REALIZATION OF ARCHITECTURAL DESIGN. ON THE FOLLOWING PAGES, ARCHITECTURAL PRODUCT AND MATERIAL MANUFACTURERS CELEBRATE AND SHARE THEIR PRODUCTS, PLANS AND VISIONS FOR 2001 WITH ARCHITECTURAL RECORD READERS.



IWP Aurora Doors with Strata™ Technology.



IWP Estate Doors with old-world authenticity.

JELD-WEN, inc.

IWP® AURORA™ AND ESTATE DOORS

IWP Makes Another Grand Entrance

Introducing Aurora™ doors from IWP® – beauty that is specifically engineered to withstand the harshest of elements. Wooden doors that have continual exposure to sun, rain, coastal salt spray, or extreme temperatures may require frequent maintenance. Although the look of wood is often preferred, these types of exposures to weather often make other materials a better choice for entryways. IWP created Aurora doors as a solid alternative for use in these harsh environments. Not only are these composite doors an excellent value, they are designed to reflect all the beauty, texture and weight of a premium hardwood door. Even better, they are virtually maintenance-free.

To create a realistic appearance of wood, Aurora doors begin with molds cast from IWP's finest hardwood doors. IWP then integrates their patented Strata™ Technology, a process in which multiple layers of resin, tints, base colors and reinforcing materials are permanently bonded to give the door the natural coloration of wood and an illusion of depth. Aurora doors are offered in three woodgrain textures: oak, mahogany and paint surface. Finished Aurora doors have the same silky feel – and the same weight – as wood, with a variety of sizes, styles and glass options to choose from.

Aurora doors can be installed in virtually any location because their installation is made easy – Aurora doors come pre-hung and prefinished.

Handcrafted Passages of Time and Tradition

The esteemed IWP® Estate Door Collection™ provides homeowners with custom hardwood entry doors in various "old world" styles. This IWP collection provides homeowners with a wide array of custom entry doors, designed to complement a variety of home architectural styles ranging from Craftsmen and Tudor to Southwestern and Mediterranean.

This door line was designed with multiple options for mixing and matching – to complement all architectural designs. Each Estate door presents the customer with tremendous options: door shapes including flat, Gothic, segmented and radius tops are available. Customers can also choose a custom finish and one of twenty-three color options. Finish options include: smooth, heavy-textured wire brush, hand-hewn or a distressed finish, and each allows for maximum personalization of every custom door.

Every Estate door is hand-built from solid wood in either clear or knotty alder, and many styles are available with a choice of decorative door accents. Perfect complements to the handcrafted simplicity of each door, accent options include wrought iron door and sidelight grilles, speakeasy doors and oversized, decorative nails called clavos. These metal options are available in dark or rust patina and provide design-enhancing details that have been specially selected for the Estate Collection.

IWP®
INTERNATIONAL WOOD PRODUCTS®
Part of the JELD-WEN family

IWP
San Diego, California
Telephone: (800) 463-3667
www.iwpdoor.com

ARCHITECTURAL AREA LIGHTING

Architectural Area Lighting (AAL), a leading manufacturer of specification grade outdoor lighting for over 30 years, designs lighting products to complement the interior, exterior and landscape design of the site. AAL offers a series of solutions to fit any design specification. AAL products are noted for their strength, high quality and energy efficiency.

AAL extensive line ranges from wall sconces to traditional fixtures and poles. AAL's contemporary line consists of the **Spectra, Universe Collection and Mitre.** The **Spectra** (shown on the right) offers the freedom to specify size, finish and optics to complement the design scheme. The **Spectra** is available as a pole or wall mount with a matching bollard to complete the line. The **Universe Collection** is a complete family of decorative, yet functional luminiare's that transcend architectural styles past and present. Available in three sizes for pole or wall mount, the **Universe Collection** allows you to mix + match luminous elements, hood shapes and optical systems. The **Mitre's** classic geometric lines complement any architectural expressions of precision, structure and line. The **Mitre** is available for wall or pole mount with a matching bollard.

AAL's traditional fixtures enhance the attractiveness of streets, plazas, parks and pedestrian walking areas. The family of traditional fixtures include the **Promenade, Town Commons and Traditional Concrete Bollard.** These decorative fixtures have state of the art optical systems for unmatched lighting performance.

AAL's newly released fixtures include the **eSconce, Oculus** and **Steplights.** The **eSconce,** an exterior wall sconce, can transform an unwelcome but necessary object on the building's surface into an integral design element. Available as an up, down or up + down design, the eSconce offers multiple fascia panels and colored gels to accent the interior or exterior of the building. The **Oculus** precision floodlighting offers multiple beam patterns in one fixture. The Oculus fixture has a variety of options and mounting configurations. The **Steplights** are available with an array of fascia designs in aluminum or brass to accent your low-level environment. A composite back box insures longevity in poured concrete installations.

MOLDCAST, a subsidiary of Architectural Area Lighting, has manufactured high quality building mounted luminaries, bollards, historic and classic lighting fixtures for over 40 years. For 2000, MOLDCAST recently released a re-introduction of the MOLDCAST brand along with new products to the industry. The newly launch catalog is filled with nine product brochures and a CD ROM for quick and easy access to product brochures, specification sheets and installation instructions in PDF format.

New products for MOLDCAST include the redesign lens of the **MDL** (Multi-Distribution Luminaire), the Historic **Charleston ContraCline** and the Historic **Chesapeake Pericline.** The **MDL** new lens (shown on the right) is now high temperature acrylic instead of polycarbonate, which means the lens will not turn yellow from UV exposure to metal halide lamps or the sun. The new lens also has improved photometry performance with less surface brightness, which will decrease discomfort glare. The **Charleston ContraCline** combines the better of two worlds-rugged construction & cutting-edge, performing optics. The Charleston ContraCline includes three reflector light distribution types and is easy to service. The **Chesapeake Pericline** is reminiscent of the old 19th century English gas lanterns. The Chesapeake's dual reflector optical system has four types of light distributions for precise illumination.

In addition to the new binder and new product designs, MOLDCAST web site is now live! This web site includes new product updates, upcoming events, brochure downloads, sales locator and more!

AAL ARCHITECTURAL AREA LIGHTING

For more information, contact:

Architectural Area Lighting (AAL)
1429 Artesia Blvd. / P.O. Box 1869
La Mirada, CA 90638-1869
Telephone: (714) 994-2700
Fax: (714) 994-0522
www.aal.net / www.moldcast.com



Spectra Series



MDL (Multi-Distribution Luminaire) Series

BPB Celotex

FOR WALLS. FOR CEILINGS. FOR ANSWERS.

Functionality and flexibility are just two of BPB Celotex' strong points in supplying design professionals with distinctive acoustical ceiling and wall solutions for interior and exterior applications.

FOR WALLS

For decades, BPB Celotex has been delivering high-quality gypsum boards that stand uniformly flat with no shadows. The uniform high-edge hardness assures that boards arrive and remain square with no wavy edges, warps, bows or deformities in shipping or installation. Uniform edge tapers are consistently calipered to form perfect joints. Uniform high-strength cores eliminate any crumbling or wide-area cracking.

BPB Celotex produces board for a wide variety of applications:

- *Fi-Rok® Gypsum Board* – Interior gypsum board that has a specially formulated core for use in fire-resistance rated designs.
- *Regular Bath Backer Resistive Wallboard* – Water resistive gypsum board used behind tiles in wet areas such as bathrooms, laundry and utility rooms, and kitchens.
- *Regular Gypsum Sheathing* – A water-resistant gypsum sheathing for application to the out side of building framing members. Serves as the base for exterior walls.
- *Exterior Gypsum Soffit Board* – For exterior soffits and carport ceilings that are completely protected from contact with water.
- *Interior Ceiling Gypsum Board* – For use on interior ceilings where framing is spaced up to 24".

FOR CEILINGS

The BPB Celotex Series of premium high-performance acoustical ceilings and interior products includes mineral ceilings, gypsum ceilings, fiberglass ceilings, composite ceiling panels and high-performance wall panels. Whether your design requirements are aesthetic beauty, acoustical performance, durability… BPB Celotex can deliver a wide variety of solutions. Featured here are three of our most popular ceiling products:

Cashmere® Acoustical Ceilings: The Cashmere acoustical ceiling is a classical system featuring reliability and style. It features lightly-textured fine-fabric appearance and factory-applied vinyl latex paint and many are offered with a 10-year limited warranty against visible sag in conditions up to 104°F and 90% relative humidity. Cashmere ceilings are available in a full selection of sizes, colors and edge details. Cashmere ceilings also include exceptional sound absorption, Protectone® products for UL fire resistance time-rated assemblies, light reflectance values of .80 and greater and are warranted against visible sag.

Additionally, the Invisigrille™ Integrated Speaker Panels system is an attractive option for the Cashmere acoustical ceiling. An industry innovation, Invisigrille ends obstructive metal and plastic grills, comes with factory-painted fabric to conceal speaker openings and is available with comparable Cashmere ceiling textures.

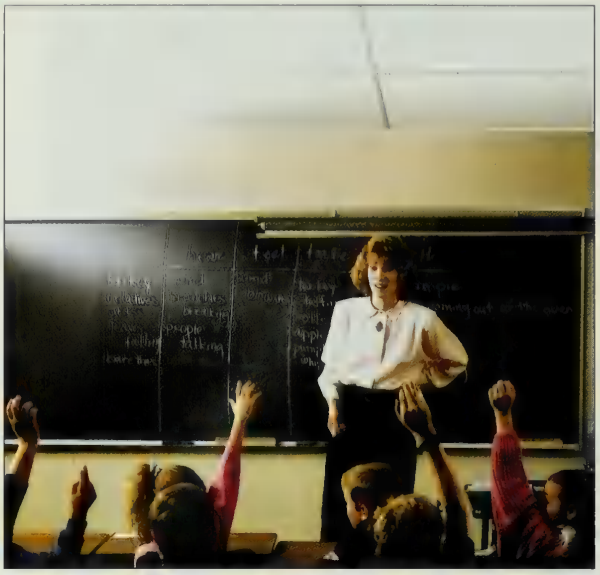
School Board™ Acoustical Ceiling Panels: School Board™ acoustical ceiling panels will significantly reduce maintenance and replacement costs. This ceiling has all the exceptional qualities of a traditional BPB Celotex acoustical ceiling, including excellent sag resistance, light reflectance, acoustical properties and highly decorative designs. Furthermore, the School Board ceiling incorporates a new impact-resistant coating making it one of the toughest ceiling boards in the industry today.

The School Board acoustical ceiling also offers design flexibility and resistance to high temperatures and humidity. It boasts up to a 25 percent increase in durability (as per ASTM C367 impact test) making it the intelligent choice for school building retrofits and new constructions. The School Board product is treated with a revolutionary acrylic polymer sprayed-on coating providing more durability while making it more impact-resistant.

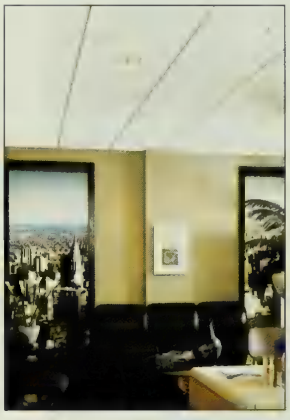
School Board comes with a ten-year 104/90 limited warranty against visible sag. Withstanding combined effects of temperatures to 104°F (40°C) and relative humidity up to 90 percent, the School Board maintains its aesthetic and decorative design.

Ultra 90+® Acoustical Ceilings: The Ultra 90+ acoustical ceiling combines all of BPB Celotex' best features into one reliable product. Ultra 90+ features the UltraGuard™ scratch-resistant finish, ultra-high light reflectance and is available in a wide variety of edge details and colors as well as in specific UL-Classified time-rated assemblies.

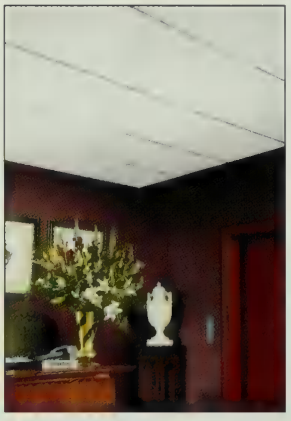
The Ultra 90+ acoustical ceiling comes with a 10-year limited warranty that protects against nicks and scratches, chipping and flaking, and punctures and indentations. Additionally, this product also carries a 10-year limited warranty against visible sag up to 104°F (40°C) and relative humidity up to 90 percent. Ultra 90+ ceiling panels cut and trim like a dream and have foil-backing as a standard feature.



School Board™ acoustical ceiling panels will significantly reduce maintenance and replacement costs.



Cashmere® acoustical ceilings are a classical system featuring reliability and style.



The Ultra 90+ acoustical ceiling combines all of the best features into one reliable product.

BPB Celotex®

For more information, contact:

BPB Celotex / Corporate Headquarters
5301 West Cypress Street, Suite 300
Tampa, FL 33607-1766
Telephone: (800) CELOTEX
Toll-free Fax: (866) 427-0287
www.bpb-celotex.com

ANCOR

Ancor Granite Tile offers a complete variety of modular granite products for interior and exterior use including floor and wall tile, flamed pavers, and exterior panels for cladding.

*...**Granite**... classic elegance that endures for function, ease of maintenance and prestige no other material comes close... from the specialists at ANCOR... expertise that means quality and consistency in product and service. In every way, the most desirable of materials, and the ultimate choice of more and more architects, specifiers and owners who seek true long term value whether the application be residential, commercial or institutional. As well, this is flooring that stands up to the heavy traffic of shopping malls, airports and other commercial facilities.*

AFFORDABLE BEAUTY

You no longer have to compromise the scope and beauty of your floor plans when you select ANCOR Granite Tile. Our specialization is the key to your success; our volume production creates efficiencies which translate into cost savings for you. We produce in North America, close to our sources of material and near you. All part of why our prices are so attractive.

VERSATILITY

ANCOR has the versatility and range to allow you the design freedom you seek. We have the colours, sizes and finishes to match your imagination and application: choose from over seventy North American and imported granites, in standard 12" x 12" x 3/8" tile, up to 18" x 18" x 1/2", and sizes in between. In accordance with your requirements, subject to certain minimums and production efficiencies, special custom order sizes can be produced as needed.

We have a finish for every environment: polished for walls, bases and accents, honed for commercial, high traffic applications, sandblasted or flamed for increased slip resistance on inclines and entrance ways or for exterior applications.

RELIABLE QUALITY

You can rest assured when you buy from the specialists at ANCOR.

Our innovative dual production line system keeps our high volume output going which translates to less down-time, reliable deliveries that are on time, and fast, flexible responses to your special requirements. It is just one way we work smarter to maintain consistent quality and prompt, responsive client service.

Standard sizes and finishes are nearly always in stock, ready to for delivery.

EASY CARE, NATURALLY

Unlike the host of flooring products on the market that attempt to imitate the look of natural stone, none can match the prestige and low-maintenance durability of ANCOR Granite Tile. Our tile is solid granite, not a cement or resin agglomerate, glazed tile, or soft stone that may chip, spall, fade or alter with time and the elements.

Under normal conditions, water rinsing or cleaning with mild soap and rinsing is all the care that is required. There is no need for the never ending cycle of sealing, waxing and stripping.

ANCOR Granite Tile Inc. is ISO 9002 certified and is a member of the Marble Institute of America, the Canadian Stone Association, and the Terrazzo Tile and Marble Association of Canada.

All Ancor granites exceed minimum requirements as set forth by the American Society for Testing and Materials (ASTM) under designation C615-85.

We would be pleased to direct you to one of our local distributors or provide you samples and brochures as appropriate; please do not hesitate to inquire.

Our samplebook contains small samples of thirty-two of our more popular materials. Individual samples of specific materials in the various finishes are normally supplied in a 4" x 6" (13 x 19cm) format, although full size samples are available as appropriate.









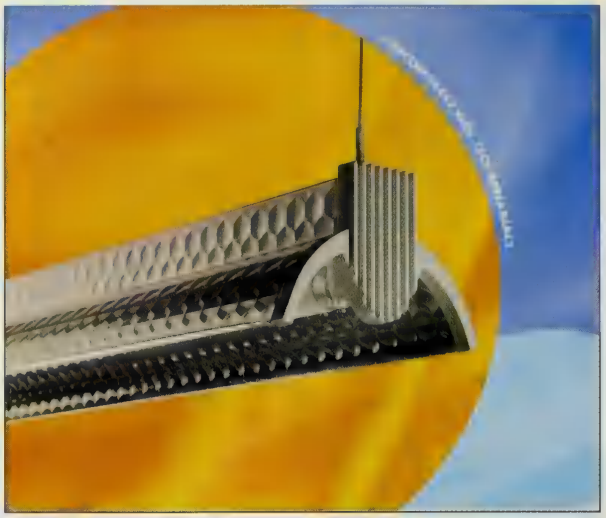




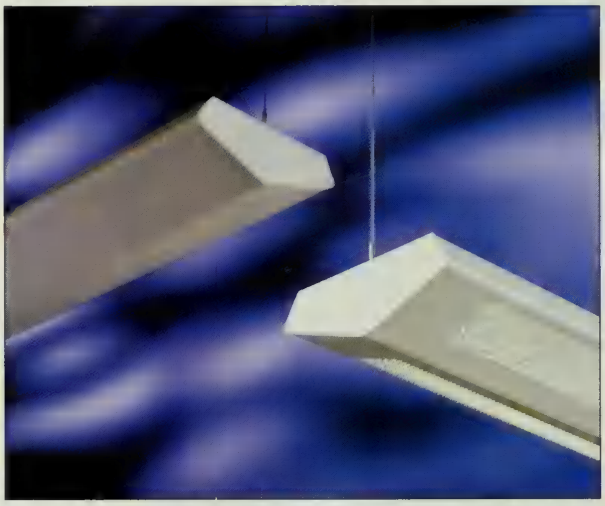
ANCOR
GRANITE TILE · TUILE DE GRANITE

For more information, contact:

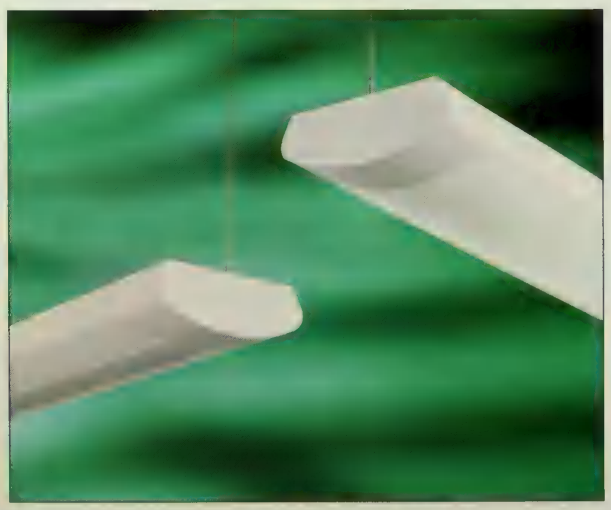
Ancor Granite Tile, Inc.
435 de Port Royal West
Montreal, Quebec, Canada H3L 2C3
Telephone: (514) 385-9366
Fax: (514) 382-3533
Email: webmaster@ancor.ca
www.ancor.ca
Claude Paquette
Sales Manager



Quest



Maxim



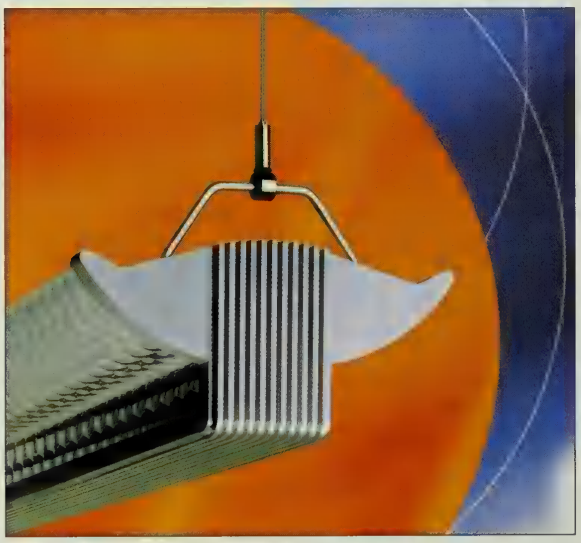
Lexim

LIGHTING CORPORATION OF AMERICA

Lighting Corporation of America (LCA) proudly announced the formation of an exciting new company this year. Alera Lighting, which was formed around the core of Columbia Lighting's architectural lighting line, has a 20-year history of supplying unique direct, indirect, and direct/indirect linear lighting systems. Designed for office, education, and institutional environments, these quality lighting systems continually deliver the latest technology in glare-free, comfortable lighting.

As part of a renewed focus on the rapidly growing linear fluorescent market, Alera Lighting introduced several innovative new products in the year 2000. Lexim and Maxim brought T5 HO technology to Alera's indirect and direct/indirect product lines. Alera recently took high-tech lighting in a new direction with Quest and IndiQuest, contemporary and sophisticated luminaires for high-end applications.

Alera Lighting maintains its manufacturing and administrative functions in Spokane, Washington. Alera products are represented throughout the U.S. and Canada by a network of independent sales representatives.



IndiQuest

ALERA LIGHTING

For more information, contact:

Alera Lighting
3808 N. Sullivan Road
Bldg. 29
Spokane, WA 99216
Telephone: (509) 921-8300
Fax: (509) 921-8360
www.aleralighting.com

READER SERVICE NUMBER 105

A/D FIRE PROTECTION SYSTEMS

Passive Fire Protection Specialists

A/D Fire Protection Systems is a privately owned company headquartered in Toronto, Ontario. A/D specializes in developing and manufacturing passive fire protection products for the construction industry. Those products include firestopping materials and sprayed fire resistive materials (fireproofing) for structural steel and concrete. The company's Quality Management Statement was registered in accordance with ISO 9001 in November 1998. An achievement they are proud of considering the company's Mission statement reads "our goal is to cost effectively manufacture passive fire protection materials that meet or exceed regulatory requirements and the expectations of our customers." The company is committed to a very active research and development program. This commitment has lead to the development of innovative products and has enabled A/D to develop unique expertise related to firestopping products and fire protection for structural steel. A/D has technical sales offices across Canada and the USA.

Fireproofing products protect the structural elements of buildings from fire and delay the occurrence of critical temperature where the load carrying capacity of the structure would be comprised. A/D manufactures conventional sprayed fibre and cementitious fire resistive materials as well as thin-film intumescent coatings. A/D's sprayed fire resistive materials are:

- *A/D FIREFILM® II*
- *A/D TYPE 5*
- *A/D 1XR*
- *A/D TYPE FP*
- *A/D TYPE 7*

A/D FIREFILM® II is the industry's leader when it comes to decorative, thin film intumescent fire resistive coatings. It is an aesthetic fire resistive coating for structural steel that provides fire resistance ratings up to 3 hours. It allows the designer to express the structure as an art form at interior locations in buildings where fire resistance ratings are required. In a fire, it softens and expands to form a meringue-like layer up to 4in. (100mm) thick which insulates the structural steel from fire. The second component of the system, the decorative topcoat, A/D COLORCOAT®, acts as a protective layer and serves as the attractive colorful finish.

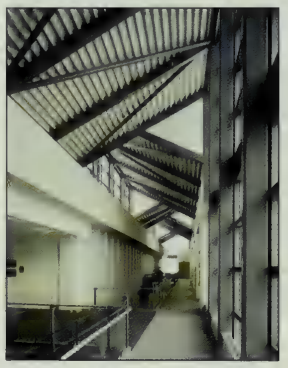
Firestopping is required by building codes to seal openings for building services when they penetrate fire rated walls and floors. Firestopping also aids in preventing the transmission of toxic fumes and gases from one compartment to another. A/D manufactures a complete system of firestopping materials all listed by ULC, ULI, WHI and/or FM. The A/D FIREBARRIER line of firestopping products consists of:

- *A/D FIREBARRIER Mineral Wool*
- *A/D FIREBARRIER Silicone and Silicone SL*
- *A/D FIREBARRIER Seal and Seal NS*
- *A/D FIREBARRIER Mortar*

New products include:

- *A/D FIREBARRIER Pillows*
- *A/D FIREBARRIER Collars*
- *A/D FIREBARRIER Intumescent Caulk*











FIRE PROTECTION SYSTEMS

For more information about any of our products, call toll-free or visit our web site:

A/D FIRE PROTECTION SYSTEMS
420 Tapscott Road, Unit 5
Scarborough, Ontario M1B 1Y4
Telephone: (800) 263-4087
Fax: (416) 298-5887
Email: mail@adfire.com
www.adfire.com



The David Geffen Foundation Building
Beverly Hills, California / Architects: Gwathmey Siegel & Associate Architects

Photo: Tom Bonner



Bright Side Residence
Vancouver, British Columbia / Architect: Bill Pechet

RHEINZINK

RHEINZINK has been in business for more than thirty years with the worlds largest zinc mill producing and distributing its products worldwide. A bright rolled finish and a "preweathered" quality as well as a complete roof drainage system are available in both finishes.

RHENZINK's alloy contains small amounts of copper and titanium. Developed for the special requirements of today's construction sector, the material has been used and approved on numerous projects. Durability, longevity, low maintenance and an elegant, aesthetically pleasing appearance are qualities that make RHEMZINK® an ideal building product.

An extraordinary commitment to quality is the basis for international acknowledgements of RHEINZINK's roof, façade and drainage systems.

The QUALITY ZINC symbol (Test No. 424-030012) awarded by TÜV Rheinland (Association of Technical Inspectors) as well as certification as per EN ISO 9001 reiterates RHEINZINK's commitment to quality and reinforces an international reputation for quality. Furthermore the material is certified as environmentally proofed building product (No. of certificate Z.RHE199).

With RHEINZINK façade systems, visions become reality. Whether for office buildings, the commercial and industrial sectors, or refurbishment projects, RHEINZINK has the right system for virtually any application. RHEINZINK façade systems not only offer maximum flexibility in styling and architectural design but feature excellent working properties and the latest state of the art in façade engineering. RHEINZINK turns your façades into a business card for architecture.

For perfect realization of extraordinary construction plans, we have our consulting service of RHEINZINK. Worldwide more than 50 engineers support the architects' and craftsmen's work. We supply literature with details and specifications for virtually every application. Our recommendations are also available in hard copy and in AutoCAD® files.

RHEINZINK

For more information, contact:

RHEINZINK
Vancouver — Toronto — Boston
Corporate Headquarters
4595 Tillicum Street
Burnaby, BC Canada V5J 3J0
Telephone: (604) 291-8171
Fax: (604) 291-1343
Email: rheinzink@rheinzink.ca
www.rheinzink.com

TECTUM

TECTUM Performance Products

For more than five decades, the commercial and institutional design and construction industry has depended on the unique acoustical panels made by Tectum Inc. whenever the need arose for acoustical wall and ceiling treatment that would also stand abuse, is easy to work and install, provides an attractive finish when left natural or painted, and is very cost effective in any interior and many exterior applications. These Tectum performance products have stood the test of time.

Today, in keeping with current design trends, sophisticated acoustical needs and insulation requirements, Tectum Inc. has developed new products using the standard Tectum panel in conjunction with other materials to provide a different look and/or enhanced characteristics.

Along with recent uses of standard Tectum acoustical panels, some of these enhanced products are pictured here, showing the practical and imaginative ways architects, designers, contractors and building owners are specifying their usage in today's public, private and educational construction.

With products such as fabric wrapped wall panel systems and decor panels, several types of composite roof deck systems and the abuse resistant Acoustical-Tough™ lifetime warranted ceiling panel system, Tectum Inc. offers a broad line of specialty acoustical building products to meet almost any commercial or institutional need.

We offer our experience, along with this full line of proven performance products, to help you satisfy your design requirements in a timely and economical manner.

Environmental Statement / Green Architecture

Tectum panels are made from sustainable raw materials. The wood excelsior is from new growth that reaches maturity in 25-30 years. The primary source of magnesium oxide used in the binder is sea water. The silicate used in the secondary binder is made from sand. Tectum Inc. recovers waste magnesium and recycles water during the manufacturing process. The recovered magnesium waste is used in the manufacturing of magnesium sulfate, a primary ingredient in the binder. These recent programs have been successful in reducing the water consumed and reducing the magnesium requirement for the manufacture of magnesium sulfate. Tectum products continue to meet the need of owners, architects and engineers who require green building products.



Tectum Roof Deck



Tectum Sound Blocks



Tectum Ceiling Panels

TECTUM INC.

For more information, contact:

TECTUM, Inc.
P.O. Box 3002
Newark, Ohio 43058-3002
Telephone: (888) 977-9691
Fax: (800) 832-8869
Email: aird@tectum.com
www.tectum.com

READER SERVICE NUMBER 108

MAXXON

Acousti-Mat® II The Ultimate Sound Deadening, UL Listed System

Maxxon is the pioneer and leader in the underlayments industry, with over 2 billion square feet of underlayments installed in apartments, commercial buildings and homes worldwide. From the original Gyp-Crete, Floor Underlayment, the Maxxon line has expanded to include:

- *Five high-strength floor underlayments , designed for everything from capping large commercial projects to delivering the heat in radiant floor heating systems Gyp-Crete, Gyp-Crete 2000, Therma-Floor, Dura-Cap, and Commercial Topping.*
- *Rapid Floor Systems Underlayments.*
- *The Level-Right, family of cementitious, self-leveling underlayments, and*
- *Acousti-Mat II, a high-performance sound control system for wood-frame and concrete construction applications.*

Maxxon stresses quality in all its products and services. With a program that attracts only the most qualified applicators, quality is continually monitored through audits, product sampling and compressive-strength testing.

New Acousti-Mat® II, The Superior Sound Control System

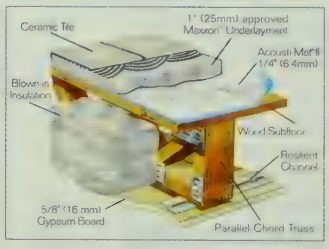
A breakthrough in sound control technology, Acousti-Mat II is the cost-effective solution to "noise" complaints, even with ceramic and wood floors. Its core of fused entangle filaments, attached to a non-woven fabric, creates a void area between the subfloor and a high-strength Maxxon, underlayment. The Acousti-Mat II™ system isolates sound waves, reducing transmission of impact and airborne sound up to 75 percent. It also provides enhanced fire control, as proven in over 50 UL Fire Rated Designs. And it's backed with sound tests by ICBO- and NVLAP-accredited laboratories.

For a solution to those "noise" complaints, specify Acousti-Mat II:

- *Increases IIC up to 20 rating points over concrete, 10 rating points over wood frame*
- *Low profile system*
- *Economical*
- *Documented sound tests*
- *Over 50 UL Fire Rated Designs*
- *Engineered by Enka*
- *From Maxxon Corporation, the floor specialists.*

To add the superior sound control of Acousti-Mat II to your next project, contact us today. We'll provide specifications, technical data, and sound test reports. Order on-line at www.maxxon.com/am2/ or call (800) 356-7887.

ACOUSTI-MAT II OVER PARALLEL CHORD TRUSS







For more information, contact:

Maxxon® Corporation
920 Hamel Road
Hamel, MN 55340
Telephone: (763) 478-9600
(800) 356-7887
Fax: (763) 478-2431
Email: info@maxxon.com
www.maxxon.com

MAXXON CORPORATION

READER SERVICE NUMBER 109



Panelfold®

FOLDING DOORS • ACOUSTICAL FOLDING PARTITIONS • ACOUSTICAL PANELS
OPERABLE WALLS • RELOCATABLE WALLS

Headquarters and Factory
10700 N.W. 36th Ave.
Miami, FL 33167-9907
Phone: (305) 688-3501
www.panelfold.com

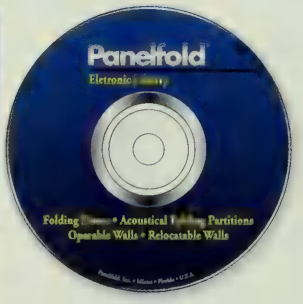


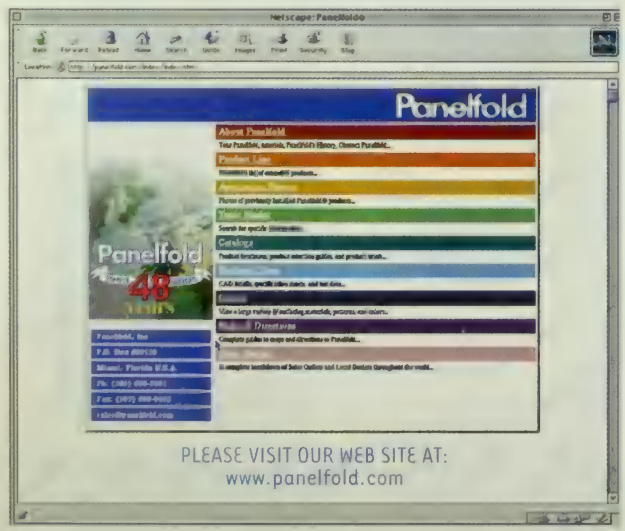
Fax: (305) 688-0185
Email: sales@panelfold.com

Architectural Products Manual



Panelfold Electronic Library Version 3.1 on CD-ROM





THE HISTORY OF PANELFOLD

Now in its fifth decade, Panelfold has long been recognized as the innovative leader in the folding door, acoustical accordion folding partition and the operable and relocatable wall industry. Established in 1953, the company has progressed from it first small factory to a 140,000 square foot modern facility in suburban Miami, Florida, U.S.A. and has been a major employer in Miami's multi-cultural community.

Guy E. Dixon, the company's founder, applied for the first patent on a wood folding door, and is generally recognized as its inventor. That original wood folding door was the prototype for Panelfold's extensive line of folding partitions including the popular Scale/4™, Scale/6™, Scale/8™, and Scale/12™, models and the Sonicwal™ acoustically rated partitions. Criterion™, the multi-use PVC door, was introduced in 1972 and, in 1987, with the addition of Fabricwal™, Panelfold entered the traditional fabric folding door market.

Moduflex™ operable walls and PrimeSpacer™ relocatable walls were first introduced to the Panelfold line in 1972. The development of the Moduflex™ line with both steel constructed and general purpose panels, available for many widths, heights and configurations, enabled Panelfold to complete its capability of providing the total spectrum of space-dividing products for the ever expanding needs of the residential and commercial construction and remodeling industries.

Panelfold products are available in a variety of colors, textures, wood veneers, decorative laminates and work surfaces, meeting the highest criteria of design specifications.

Panelfold products are distributed nationally by installing contract companies and residential distributors in every major market area.

With a growing network of licensed manufacturers and distributors in over 54 countries, Panelfold is now represented globally and has major installations on every continent. Panelfold has been awarded the "E Star" Award by the U.S. Department of Commerce for excellence in exports.

Still owned and managed by the Dixon family, Panelfold remains committed to excellence in the design and production of folding doors and partitions and operable and relocatable walls into the twenty-first century.

READER SERVICE NUMBER 101

ARCHITECTURAL RECORD CALL FOR ENTRIES

Record Interiors 2001

The editors of ARCHITECTURAL RECORD announce the annual RECORD INTERIORS awards program. This program is open to any registered architect; work previously published in other U.S. national design magazines is disqualified. Of particular interest are projects that incorporate innovations in program, building technology, and use of materials. The entry fee is $50 per submission; please make checks payable to ARCHITECTURAL RECORD. Entries must also include plan(s), photographs (transparencies, slides, or prints), this entry form, and a brief project description, all firmly bound in an 8 ½-by-11-inch folder—postmarked no later than April 29, 2001. Anonymity is not required. Winning entries will be featured in the 2001 RECORD INTERIORS. Other submissions will be returned or scheduled for a future issue. Please include a self-addressed envelope with the appropriate postage, and allow 10 weeks for return.

Name of firm:_____

Address:_____

Phone:_____

Fax:_____

E-mail:_____

Contact person:_____

Name of project:_____

Location of project:_____

Type of project *(i.e. residential, restaurant, retail, etc.)*:_____

Agreement: We will not offer this project for consideration by another national design magazine during the 10-week review period at ARCHITECTURAL RECORD.

Signature:_____ **Date:**_____

Print name:_____

Please mail submissions to:
Sarah Amelar • RECORD INTERIORS • ARCHITECTURAL RECORD
Two Penn Plaza • Ninth Floor • New York, NY 10121

This form must be included with your entry. If you have any questions, please E-mail Sarah Amelar at sarah_amelar@mcgraw-hill.com

ADVERTISERS INDEX

Bold: *indicates page number.*
Italic: indicates Reader Service Number.

PAGE NUMBER	READER SERVICE NUMBER	
39	*19*	3D WIN
251	*106*	A/D Fire Protection Systems Inc
275		AIA Accent
270		AIA Contract Documents
236		AIA Convention
208		AIA Firm Survey
219	*68*	Alera Lighting (IndiQuest)
250	*105*	Alera Lighting (profile)
24	*12*	Alusuisse Composites Inc
249	*104*	Ancor Granite Tile Inc
35	*17*	Ann Sacks Tile & Stone
207	*61*	Ann Sacks Tile & Stone
247	*102*	Architectural Area Lighting
9, 239		Architecturalrecord.com
234		Architecturalrecord.com Interviews
243		Architectural Record Gift Subscript
2cov-1	*1*	Armstrong
26		Autodesk (piracy)
164		Autodesk (iDesign)
32	*16*	Avonite
181	*50*	Bentley Systems Inc
222	*71*	BOCA/Bldg Offcls & Code Admins Intl
50-51	*25*	BPB Celotex
248	*103*	BPB Celotex (profile)
162	*46*	Buzzsaw.com
52	*26*	C/S Group
56	*28*	Ceco Door Products
152	*43*	CENTRIA Architectural Systems
64	*34*	CNA/Victor O Schinnerer & Co Inc
222	*70*	Continental Bridge
20	*10*	Copper Development Association
240	*82*	CRSI/Concrete Reinforcing Steel Inst
48	*23*	Dodge-Regupol Inc
30-31	*15*	DORMA Group North America
234	*77*	Doug Mockett & Company Inc
37	*18*	Dow Chemical Company
174	*47*	e-Builder
196	*56*	Eagle Windows & Doors
43	*21*	EFCO Corporation
18-19	*9*	Ellison Bronze
244		Emergent Building Technologies Conf
235	*79*	Enlink Infotech Ltd
211	*64*	Florestone
71	*37*	Follansbee Steel
241	*83*	FW Dodge, Div of McGraw-Hill Cos
41	*20*	Georgia-Pacific (gypsum products)
161	*45*	Georgia-Pacific (structural panels)
72-73	*38*	Glen Raven Mills Inc
49	*24*	GR Plume Company
177	*48*	Graphisoft
58	*29*	Hansgrohe Inc
12-13		IMI/International Masonry Institute
10	*6*	Italian Trade Commission
199	*57*	IWP
246	*110*	IWP (profile)
80	*40*	Julius Blum & Co Inc
22-23	*11*	Kawneer Company Inc
188	*52*	Kim Lighting
4cov	*100*	Kroin Incorporated
226	*74*	Laticrete International Inc
190	*53*	Lehigh Portland Cement Company
67	*35*	Louis Poulsen Lighting Inc
271		Making Academics Count
28-29	*14*	Marvin Windows & Doors
253	*109*	Maxxon Corporation
192	*54*	MBMA/Metal Building Mfrs Assn
221	*69*	Metal Construction Association
238	*81*	Metpar Corp
128-129		Microsoft
214	*66*	Miele
68	*36*	MM Systems Corporation
209	*62*	Mortar Net
235	*78*	Musson Rubber Co
212	*65*	Nathan Allan Glass Studios Inc
55	*27*	National Gypsum Company
3cov	*85*	Nemetschek North America
130	*41*	Owens Corning
254	*101*	Panelfold
158	*44*	PCL Constructors Inc
62	*32*	Pemko
194	*55*	Petersen Aluminum
16-17		Revit Technology Corporation
63	*33*	Rheinzink Canada Ltd
252	*107*	Rheinzink Canada Ltd (profile)
60	*31*	Roppe Corporation
201	*58*	Schott Corporation
229	*75*	Sloan Valve Company
8	*5*	Solutia
184	*51*	Sony Electronics Inc
45	*22*	SPI Lighting Inc
2-3	*2*	Steelcase
224	*73*	Sweet's
257	*84*	Sweet's (Tate Access Floors)
253	*108*	Tectum Inc
210	*63*	Thomas Register
4	*3*	Toyota and the Environment
205	*60*	Trade Commission of Spain
236	*80*	US Marine Corps Heritage Center
59	*30*	VELUX-AMERICA Inc
207	*67*	Viking Range Corporation
11	*7*	Vistawall Architectural Products
78-79	*39*	Vulcraft, A Division of Nucor Corp
202	*59*	Wausau Tile
223	*72*	Wausau Window and Wall Systems
151	*42*	Wayne-Dalton Corporation
14-15	*8*	Weather Shield Windows & Doors
7	*4*	Weyerhaeuser
187	*49*	Wind2 Software
230	*76*	Wiremold
27	*13*	YKK AP America Inc

For additional information on these advertisers, circle corresponding number on Reader Service Card, or visit our web site at ***www.architecturalrecord.com*** *and click on Advertiser Information.*

Executive Offices

The McGraw-Hill Companies
Two Penn Plaza
New York, NY 10121-2298

VICE PRESIDENT / PUBLISHER
Elaine Shusterman
(212) 904-3475 Fax: (212) 904-4652
shusterman@mcgraw-hill.com
Assistant: Monika Maczinskas

ADVERTISING DIRECTOR
David Johnson
(212) 904-6217 Fax: (212) 904-4652
dave_johnson@mcgraw-hill.com
Assistant: Joan Notaris

PRODUCTION MANAGER
Stephen R. Weiss
(212) 904-2793 Fax: (212) 904-6800
stephen_weiss@mcgraw-hill.com

PROMOTION DIRECTOR
Deborah Smikle-Davis
(212) 904-4558 Fax: (212) 904-6774
deborah_smikle-davis@mcgraw-hill.com

Advertising Sales

NORTHEAST / MID-ATLANTIC
Two Penn Plaza
New York, NY 10121-2298
Ted Rzempoluch
(212) 904-3603 Fax: (212) 904-4256
rzempoluch@mcgraw-hill.com

MIDWEST
One Prudential Plaza
130 East Randolph Street, Suite 400
Chicago, IL 60601-6213
Mike Gilbert (IL, IA, MN, MO, OH, W.PA, WV)
(312) 616-3338 Fax: (312) 616-3276
mike_gilbert@mcgraw-hill.com
Meg McNeel (IL, IN, KS, MI, ND, NE, OK, SD, TX, WI)
(312) 616-3339 Fax: (312) 616-3276
meg_mcneel@mcgraw-hill.com
Assistant: Mamie Allegro

SOUTHEAST / MID-ATLANTIC
4170 Ashford-Dunwoody Rd.
Atlanta, GA 30319
Susan Shepherd
(404) 843-4770 Fax: (404) 252-4056
sshepherd@mcgraw-hill.com
Sales Assistant: Kathy von Broembsen

WEST (AZ, CA, CO, NM, NV)
Media Sales Associates
1750 Nantucket Circle, #134
Santa Clara, CA 95054
Bill Hague
(408) 492-9292 Fax: (408) 492-9797
(800) 830-4351 Fax: (253) 858-7576
bill_hague@mcgraw-hill.com

WEST (BRIT. COLUMBIA, ID, OR, S. CA, UT, WA)
5901 S.W. Macadam Avenue, Suite 230
Portland, OR 97201
Bill Madden
(503) 224-3799 Fax: (503) 224-3899
billmad@msn.com

CANADA (EXCEPT BRITISH COLUMBIA)
48 Little Rebel Road, RR 3
Schomberg, Ontario L0G 1T0
Frank A. Spangenberg
(905) 939-0653 Fax: (905) 939-0654
spang@sympatico.ca

CLASSIFIED ADVERTISING / MANUFACTURERS' SPOTLIGHT / POSTCARD SERVICE
Ally Wingate
(800) 484-4042 ext 3042 Fax: (770) 889-9152
ally_wingate@mcgraw-hill.com

Editorial

(212) 904-2594 Fax: (212) 904-4256
www.architecturalrecord.com

Subscriber Service

(888) 867-6395 (USA only)
(609) 426-7046 Fax: (609) 426-7087
p64cs@mcgraw-hill.com

Back Issues

(212) 904-4635
phyllis_moody@mcgraw-hill.com

Reprints

(609) 426-5129 Fax: (609) 426-5472
doreen_bitowf@pubs.mcgraw-hill.com

Tate
Access Floors

Success

comes from

great

partnerships

and

smart marketing.



don't stay in business for 40 years without being a smart
keter. That's why Tate Access Floors takes advantage of the
et's Marketplace with a dynamic digital presence and
nsive CAD libraries in Sweet's CD and sweets.com and print
keting programs in Sweet's Catalog File-Architects, Engineers
Contractors Edition, Product News and Sweet's Directory.

tinually a Market Leader, Tate Access Floors understands that
n AEC professionals need product and specification information,
turn to Sweet's. An integrated program in Sweet's gives Tate
ss Floors direct access to Marketplace members at the very
nent they are ready to specify or purchase. Now that's smart.

CIRCLE 84 ON INQUIRY CARD

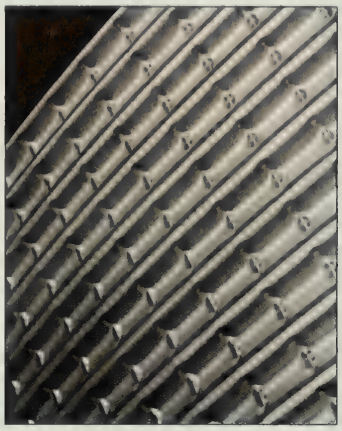
Sweet's
Construction's Product Marketplace℠

sweets.com is part of the **construction.com** network

A Division of The McGraw-Hill Companies

Curved 7/8" corrugated metal roof & wall panels

Curveline's service center can curve over 100 varieties of metal panels, now including 7/8" corrugated profiles. The patented "crimp-curving" process transforms an ordinary corrugated profile into a highly textured panel with diamond-embossed appearance. Applications include roofs, walls, canopies, etc. Phone 909-947-6022, fax (909) 947-1510, web www.met tile.com/curveline, email curveline@curveline.com.



Curveline, Inc.

CIRCLE 120 ON INQUIRY CARD

Sculptured Concrete Masonry Unit

Winner of the "Award for Design Excellence", the 8"x16" Grille Blocks are made of 7,000 psi white Glass-Fiber-Reinforced Concrete and are sculptured on both sides. Visibility is limited to 5%, while allowing 22% free air to pass through, providing privacy, aesthetics, ventilation and security. Contact us at 941-925-3331, Fax 941-925-5841, Grillblock@aol.com



Grille Block, LLC

CIRCLE 121 ON INQUIRY CARD

Melton Classics

Melton Classics architecturally correct columns, balustrades, and architectural details, are the industry standard for quality and design. Columns are available in fiberglass, resin composite, GFRC, GRG and wood. MarbleTex™ Balustrades and columns are integrally Colored and require no painting. Ask us about our complete line of architectural ornamentation in Melton Stone™ cast stone. Tel: 800-963-3060 www.meltonclassics.com



Melton Classics

CIRCLE 122 ON INQUIRY CARD

Birds Take Flight From Nixalite!

Preserve architecture treasures with Nixalite bird control. Effective and humane, these stainless steel strips provide a protective barrier that is long lasting and inconspicuous. With the addition of ColorcoatTM, a color powder coating option, Nixalite is almost invisible. For information, call 800-624-1189, Fax 309-755-0077 or visit our website at www.nixalite.com



Nixalite® of America Inc.

CIRCLE 123 ON INQUIRY CARD

Timeless American Design ©2000 FLLWFDN

Taliesin®-1 Lamp, designed by Frank Lloyd Wright® in 1925. Taliesin®-Mini, adaptation of original design. Available in several finishes. Yamagiwa is the sole licensee of the FLLWFDN authorized to produce lighting. Other types, floor lamps, wall sconces, and pendants available. www.yamagiwausa.com Ph: 888-879-8611, 31340 Via Colinas, #106, Westlake Village, CA 91362



Yamagiwa USA Corporation

CIRCLE 124 ON INQUIRY CARD

Carriage House Shangle™

Utilizes CertainTeed's exclusive Super Shangle® construction with two full-size base shingles, resulting in virtually four layers of shingle protection and 8-inch exposure when applied. This super-heavy-weight fiber glass shingle (355 lb. per square) also features a unique chamfered cut for scalloped appearance. UL Class A; lifetime limited, transferable warranty; algae-resistant UL Certified to meet ASTM D 3462.



CertainTeed Corporation

CIRCLE 125 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Concrete Waterproofing by Crystallization

pplied as a slurry coating ypex is a chemical treatment iat waterproofs by penetrating ie concrete with a crystalline rmation that "plugs" the pores the structure preventing water epage. Xypex is ideal for use n the "inside" of wet under- ound structures.



Xypex Chemical Co.

CIRCLE 126 ON INQUIRY CARD

NANZ

The No. 2006 is a Bauhaus handle based on a Walter Gropius design. Nanz manufactures this and a wide range of other levers, knobs, locks, hinges and cabinetry hardware. Fax a request for our free Product Selection Guide or our $20 catalogue featuring this and over seventy other handles. phone 212-367-7000, fax 212-367-7375. www.nanz.com

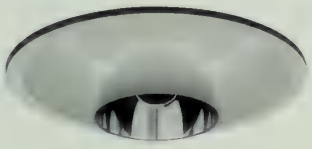


Nanz Custom Hardware Inc.

CIRCLE 127 ON INQUIRY CARD

ILA Light-in-Light System

ie WILA Light-in-Light fixture with mixture of diffuse (20%) & direct 0%) light simulates the emission aracteristics of a clear sunny y; the effect is produced by its ite diffuse outer main reflector & sted glass refractor. The central ne reflector is formed of 99.98% re aluminum with an inner finish specular alzak & an outer finish high reflective powder coated ite enamel. The fixture comes in sizes 10" & 15" diameters, utiliz- g triple tube compact fluorescent nps (18, 26, 32, 42 watts) & for stom designs in metal halide (70, 0, 150 watts).



WILA Lighting, LLC

CIRCLE 128 ON INQUIRY CARD

Xenon Luminaries

Space Cannon Illumination Inc. introduces the Litehose, the latest in linear lighting technology made of extruded, durable optical-grade acrylic. Available in different diameters and sizes, reflective paints and films are not required. The Focus is an architectural colored luminarie utilizing a 1200w lamp source designed to work with the Litehose or separately. 888-705-1028.



Space Cannon

CIRCLE 129 ON INQUIRY CARD

Hot Off The Press

nce 1927, plastic laminate has en recognized for its contem- rary design, durability and st/value over alternative options. Industries Inc., is offering a e special report that examines development, advantages and rge in popularity of decorative minates – once described by ne magazine as the "material of a usand uses." Call VT Industries lay to ask for the free special ort at 800-827-1615, ext. 210.



VT Industries

CIRCLE 130 ON INQUIRY CARD

ADA Insulation Safety Covers

Plumberex Specialty Products, Inc. is the only company that manufactures a complete line of ADA safety covers for commercial & residential applications, meeting all building & fire codes with a -0- smoke rating. The Handy-Shield™ Safety Cover is the one and only ADA safety cover on the market with a "Dual" fastening system to help deter theft! For more information call 800-475-8629, Website: www.plumberex.com or email: plumberex@earthlink.net



Plumberex Products, Inc.

CIRCLE 131 ON INQUIRY CARD

Applications

The new flush exit device is designed for use on TOTAL DOORS in single, pairs and double egress pairs. Ideal for corridor & elevator lobby applications in all commercial facilities. The exit device allows continuous, uninterrupted sight-lines in corridors when doors are pocketed in the open position. Its quiet operation is ideal anywhere noisy hardware is a problem. TOTAL DOORS can be retrofitted into existing door frames, saving time & expense.



Openings

CIRCLE 132 ON INQUIRY CARD

Ornamental Picket Fence with a Purpose

We have given special attention to each & every component of our fence. Every item is designed for strength, durability and low maintenance. No other company builds a complete fence — rail, rivets, brackets, pickets and posts, that is stronger, more durable, have more security or lower maintenance costs than our fences. Monumental Iron Works, 6500 Eastern Ave., Baltimore, MD 21224. Tel: 410-633-6500, Fax: 800-239-2963.

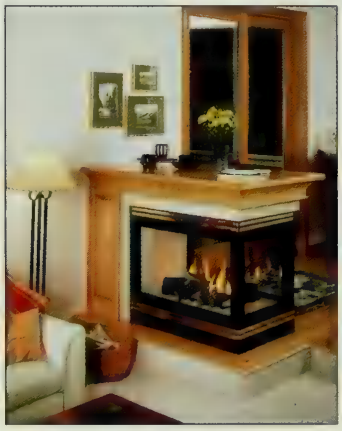


Monumental Iron Works

CIRCLE 133 ON INQUIRY CARD

Three-Sided Fireplace for Unlimited Installations

Heat-N-Glo introduces model PIER-TRC, a three-sided direct vent fireplace that can be terminated vertically or horizontally to accommodate nearly any application. The PIER-TRC is perfect as a room divider, bar, end of counter or a wide variety of creative installation possibilities. As with all Heat-N-Glo fireplaces, the PIER-TRC can be operated by remote control for the ultimate in convenience. Call 888-427-3973.



Heat-N-Glo

CIRCLE 134 ON INQUIRY CARD

Dodge-Regupol Launches ECOsurfaces™

Dodge-Regupol (DRI), the world's largest converter of post-consumer tire rubber, launches Ecosurfaces™, xtreme recycled rubber™ flooring for both indoor & outdoor commercial applications. Not only environmentally sound, but also available in 38 vibrant colors, Ecosurfaces in rolls & tiles responds directly to designers' needs & their budget concerns. For a fresh new colorful way to create attractive environments, call Gerbert Ltd. at 877-Ecosurfaces (877-326-7873).



Gerbert Ltd.

CIRCLE 135 ON INQUIRY CARD

Specify This.

Did you know one of the most cost-effective ways to produce high-quality, frameless cabinet systems is CabParts? With over 1,500 sizes and types of cabinet boxes, CabParts are easily assembled to produce cabinet installations of superior quality. Precisely dimensioned, fixed pricing and high-density shipping mean you have more control over Division 6000 results than possible through alternatives. Call 970-241-7682 or visit our website for the full story. www.cabparts.com



CabParts

CIRCLE 136 ON INQUIRY CARD

Boa Two-Circuit Track System

Bruck Lighting, the international leader in innovative low-voltage cable and track systems, introduces Boa, a low-voltage two-circuit track system with dual switching ability. Boa may be suspended or flush mounted, installed vertically or horizontally and is available in chrome or matte chrome. All Bruck Uni-lights fixtures can be utilized with Boa as well as all seven other Bruck track systems. www.brucklighting.com



Bruck Lighting Systems

CIRCLE 137 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Shipping Worldwide

rchitectural Pottery is a com- ercial manufacturer of large ndscape planters and ethnic productions in FIBER-CRETE GFRC) ARCHSTONE (FRP) nd English Style Sandstone with GF RC). Architectural pot- ry is the largest importer of andmade Greek and Italian terra tta in the U.S. Highlight your lat- t project with the finest imported d custom made pottery avail- le. Call now for a free catalog 88) ARCHPOT or visit www.arch- t.com; fax: 714-898-5109.



Architectural Pottery

CIRCLE 138 ON INQUIRY CARD

Site Furniture of Distinction

Keystone Ridge Designs, Inc. is the architect's choice for premier site amenities. Offering a full line of steel furnishings, we pride ourselves on exclusive designs and our patented powder coat finish, KEYSHIELD,™ that is unparalleled in the industry. Quality, craftsmanship, and dedication to your creative vision are the hallmarks of Keystone Ridge Designs. For more information please call 800-284-8208 or e-mail: KeystonRdg@aol.com. www.keystoneridgedesigns.com



Keystone Ridge Designs

CIRCLE 139 ON INQUIRY CARD

Protect Against Winter Ice & Summer Hail

r new construction or retrofit – PI Ice Deflector protects HVAC, ns, condensers, skylights, piping, ctwork and other roof-or-ground- ounted equipment against dam- e from falling ice from towers, alls and adjacent buildings. Also otects against hail and wind dur- g spring and summer thunder- orms. Structural curbs, equip- ent supports and adapters also ailable. Call RPI for solutions. 0-262-6669 www.rpicurbs.com

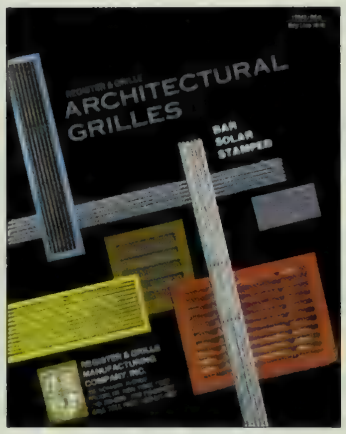


Roof Products, Inc.

CIRCLE 140 ON INQUIRY CARD

Decorative Grilles

Unusual visual effects emerge when our grilles are designed for area effects. Versatility is the theme. R&G offers architects and interior designers many ways to express the changing forms of metal with the integrity of R&G's architectural grilles. Custom or standard finishes are available plus any grille can be made in matching color to blend with your decor. 202 Norman Ave., Bklyn, NY 11222. 800-521-4895, Fax: 718-349-2611.



Register & Grille Mfg. Co.

CIRCLE 141 ON INQUIRY CARD

Parallel Design Partnership, Limited

len's brackets," an anodized- minum shelving system designed M Ali Tayar, provides an ele- nt alternative to existing bracket- d-track systems. Cantilevered ackets come in two sizes, for elves 3/4" or 3/8" thick and 10" ep. Wall-mounted tracks permit 1/2" adjustment of wood, glass plexiglass shelves. For more o phone Parallel Design Tel: 2-989-4959 Fax: 212-989-4977.



Parallel Design

CIRCLE 142 ON INQUIRY CARD

Unique Early Childhood Furniture

GRESSCO, Ltd introduces HABA® a new line of children's modular Loft furniture, shelving, platforms and room partitions in addition to our existing array of Kinder-System™ reading furniture. Now you can create a truly unique children's area in your hospital waiting room, daycare center, church or library. Call GRESSCO today for a FREE catalog at 800-345-3480, www.gresscoltd.com



GRESSCO Ltd.

CIRCLE 143 ON INQUIRY CARD

T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Illuminated Directory



APCO's award winning Visulite® directory is the finest in illuminated directories. Text and graphics appear to suspend in the background through the use of tinted solar glass and negative graphics that are evenly illuminated by fluorescent light. Changeable graphics are housed in cartridges designed to prevent light leaks. Visulite® is offered in a variety of finishes with eight attractive door shapes. APCO Graphics, Inc., (404) 688-9000, E-mail: sales@apcosigns.com, Web: www.apcosigns.com

APCO Graphics, Inc.

CIRCLE 144 ON INQUIRY CARD

ADA Compliance Signage

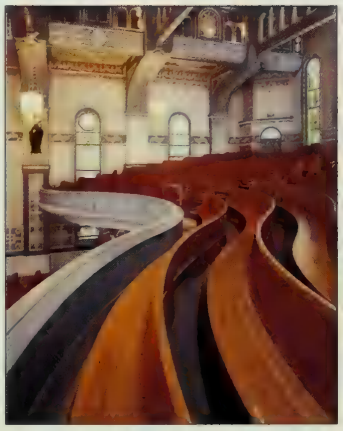


Innerface makes it easier for you to meet the Americans With Disabilities Act (ADA) signage standards. Innerface offers (1) A variety of compliance signage, (2) National distribution (3) Solid 27 year history and (4) Economical, attractive, and highly functional interior and exterior signage. Innerface also offers signage planning and wayfinding services. For free literature, please call 800-445-4796.

Innerface

CIRCLE 145 ON INQUIRY CARD

The Radius Curved Church Pew



Since 1919, New Holland Church Furniture has supplied churches nationwide with both custom & standard church furniture. Today, New Holland is the only manufacturer of "Radius Curved Pews" in the USA. As a certified member of the Architectural Woodwork Institute (AWI), you can be assured of our consistent high quality. New Holland has just developed all new product catalogs for our Pews and Solid Wood Chairs. New Holland Church Furniture, 313 Prospect St, New Holland, PA 800-220-1465

New Holland

CIRCLE 146 ON INQUIRY CARD

The Opening Glass Wall

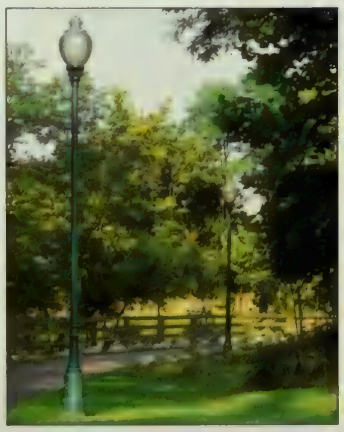


A full line of aluminum and wood framed systems that make large exterior openings possible. Expand space with indoor/outdoor areas. Increase business with large, inviting entrances. Ideal for residential and commercial applications. An aesthetic, engineered solution offering weather tightness, security, and ease of operation can be provided for almost any conceivable application. Available are folding, paired and individual panel systems. Call 800-873-5673 or fax 415-383-0312. nanawallsystems.com

Nana Wall Systems, Inc.

CIRCLE 147 ON INQUIRY CARD

Decorative Posts & Poles



More than 30 years of experience comes together in each Hapco aluminum pole design. The Abingdon, Va., based company is an engineering leader with in-house design analysis and testing facilities. Hapco specializes in conventional and decorative lamp posts and architectural street light poles. Mounting heights range from eight to 45 feet.

Hapco

CIRCLE 148 ON INQUIRY CARD

Neo-Metro™ Collection



Acorn Engineering Company introduces a new line of designer, stainless steel bath fixtures. The Metro-Urban Toilet (here in "Mira" finish) is fabricated entirely out of heavy gauge stainless steel. The Metro-Urban Toilet uses only 1.6 gpf. Acorn's Neo-MetroTM Collection also manufactures exclusive stainless steel washbasins, bathtubs, urinals and other fixtures for the residential and commercial bath. For more information: 800-591-9050 email: info@neometro.com www.neometro.com

Neo-MetroTM Collection

CIRCLE 149 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

New Fire Retardant Treated Wood Catalog

Order the latest treated wood catalog from Hoover Treated Wood Products, Inc. PYROGUARD® and EXTERIOR FIRE-X® are the featured products. CCA KDAT and COP8® preservative treatments along with PLYWALL Sound Barrier System are included. Visit Hoover's web site at www.frtw.com. For a free catalog call 800-TEC-WOOD (832-9663) or e-mail hoover@frtw.com.



Hoover Treated Wood

CIRCLE 150 ON INQUIRY CARD

Scoreboards for Sports NEVCO Scoreboard Company

NEVCO Scoreboard Company manufactures scoreboards for the following sports: basketball, baseball, football, soccer, wrestling, volleyball, swimming, track, hockey and in-line hockey. Our indoor scoreboards are available in incandescent and LED (light emitting diodes). Nevco scoreboards carry a 5 year guarantee and are UL Listed/ CSA Certified. Call 800-851-4040 for information and a free color catalog. We have been manufacturing scoreboards for over 65 years. www.nevcoscoreboards.com Email: nevco@nevcoscoreboards.com



NEVCO Scoreboard Company

CIRCLE 151 ON INQUIRY CARD

CLEAR-Pb® Lead-Plastic Radiation Shield

Discover the advantage of incorporating Nuclear Associates CLEAR-Pb® Lead-Plastic Radiation shielding into your next project! Lead-impregnated plastic won't shatter; space saving; cost-effective; more versatile than old-fashioned lead-glass; quick, hassle-free installation; ideal for medical and non-medical facilities; available in more than 100 standard sizes, seven lead equivalencies and kits. For further information, call 888-466-3257, Web: www.nucl.com



Nuclear Associates

CIRCLE 152 ON INQUIRY CARD

Mini-JOMY® Pole Ladder

A scaled down version of the JOMY® Safety Ladder, specially designed for residential and light commercial applications. The Mini-JOMY® looks like a drainpipe but folds out to a 17" wide ladder with slip resistant rungs constructed of extruded anodized aluminum and stainless steel. The Mini-JOMY® is maintenance free and will last the lifetime of any building. Can be locked at ground level for access applications. Call 800-255-2591 for additional information. Or find us at www.jomy.com



JOMY® Safety Products

CIRCLE 153 ON INQUIRY CARD

Vertical Platform Lifts

The National Wheel-O-Vator Co., Inc. designs the Vertical Platform Lift with Quality, dependability, customization and service in mind. We are committed to manufacturing the best vertical platform lift in the business. When your number one need is accessibility for a new home, pre-existing home or commercial application, call national wheel-o-vator at design line 800-968-5438. email: jgreaves@wheelovator.com Web site: www.whelovator.com



National Wheel-O-Vator

CIRCLE 154 ON INQUIRY CARD

Building Home Remodeling

Waupaca Elevator has the answer to your Up/Down needs. In business for almost 50 years we have perfected the comfort, convenience, mobility, and safety necessary for the modern home elevator. Look to the 21st Century in home design by installing a Waupaca Elevator in your home today. For further information contact: 1050 So. Grider St., Appleton, WI 54914. Tel: 800-238-8739.



Waupaca Elevator

CIRCLE 155 ON INQUIRY CARD

TV Mounts and A/V Mounting Accessories

Peerless industries manufactures mounts and mounting accessories for electronics including televisions and monitors, plasma screens, LCD projectors, speakers, security cameras, and computer monitors. Peerless mounts are appropriate from boardrooms to stadiums. All are designed for strength and durability, aesthetics, and for ease of assembly and installation. Made in the U.S.A by Peerless Industries, Inc., 1980 Hawthorne Avenue, Melrose Park, IL 60160, 708-865-8870 or 800-865-2112. www.peerlessindustries.com

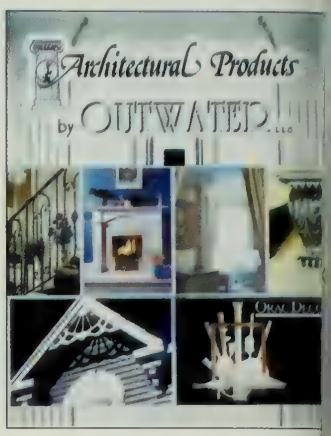


Peerless

CIRCLE 156 ON INQUIRY CARD

Architectural Products by Outwater

Outwater's Free 950+ Page Master Catalog for 2001 is the most important building & renovating tool you will ever have in your possession! Referred to by industry professionals as "the definitive must have reference source," each of the newly introduced & regularly stocked products featured in the catalog furnishes end users & specifiers with complete schematics, information, pricing & photos or drawings to aid in application & purchasing decisions. Some of the featured products include Interior/Exterior Millwork, Columns, Brass Hardware, Wrought Iron Components, Lighting, Furniture & Cabinet Components, Knobs & Pulls & more. Call 800-835-4400; Web site: www.outwater.com

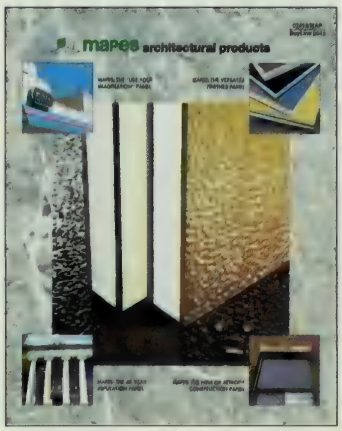


Architectural Products by Outwate

CIRCLE 157 ON INQUIRY CARD

Graffiti Resistant Panels For Infill Applications

Mapes Industries offers a complete line of graffiti resistant panels with a genuine porcelain enamel on aluminum surface. In-house color matching capabilities combined with various component options provide the designer with unlimited design solutions. Kynar, anodized and baked enamel finishes are also available. For more information, contact the factory at www.mapeind.com



Mapes Industries, Inc.

CIRCLE 158 ON INQUIRY CARD

Radiant Barrier Low E Coating

LO/MIT-I Radiant Barrier Coating is a silver colored, non-thickness dependent, low cost spray applied replacement for foil type barriers. It conforms to ASTM C 1321-98 specification for "Interior Radiation Control Coatings", and is an EPA Energy Star Ally product. Shipped premixed, it is easily applied with standard spray equipment. Solar Energy Corporation, 129 Walters Ave., Ewing, NJ 08638-1829. Ph: 609-883-7700, Fax: 609-497-0182, Web Site: www.solec.org, Email: 71263.413@compuserve.com



Solar Energy Corporation

CIRCLE 159 ON INQUIRY CARD

UV/FX Scenic Productions

UV/FX wrote the book on Ultra-Violet Visual Effects which are designed, art directed and painted (and now even printed). UV/FX specialize in Dual Images, Complete Invisible treatments, Day to Night Effects, 3-D scenery and more for changing themed walls, backdrops and ceilings. www.uvfx.com, Tel./Fax 310-392-6817.



UV/FX

CIRCLE 160 ON INQUIRY CARD

Eliason Easy Swing® Double Action Doors

Eliason, the original & only manufacturer of Easy Swing® Doors, has announced the availability of their new 2001 Price Spec catalog. Doors are color illustrated with complete specifications and prices. Available in a variety of sizes, styles and decor options. Doors are sold direct and the price catalog is sent no charge. Eliason Corporation, P.O. Box 2128, Kalamazoo, MI 49003. Tel: 800-828-3655 Fax: 800-828-3577 Email: doors@eliasoncorp.com Web site: www.eliasoncorp.com



Eliason Corporation

CIRCLE 161 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Chapel StoneTM

Hanover® Architectural Products ntroduces Chapel Stone™ Gar- den and Masonry Walling – Nothing quite adds charm to a ome or building like stone. Hanover's Chapel Stone™ Gar- den and Masonry Walling make his beautiful characteristic afford- able and available. Manufactured om the highest quality concrete ith over a million pounds of ressure, the product has the ame density and high compres- ive strength of natural stone. For ore information please call us at 00-426-4242.



Hanover Architectural Products

CIRCLE 162 ON INQUIRY CARD

Custom Noise Absorption Products

Essi Acoustical Products Company's Silentspace Wall Panel's, Ceiling Panels, baffles & Banners solve acoustics while providing the aesthetics you require. Products are ideal for board rooms, offices, schools, gymnasiums, arenas, theaters, libraries or any space where there is unwanted noise. For fifteen years Essi has been providing products to meet demanding specs. Custom made for your specific project. Choose the thickness, shape, edge detail, tackable, & attachment method, finished with standard textiles or to coordinate with your custom textiles. A complete binder which contains tech. data, fabric selections & acoustical data is available. 800-886-6678, Fax 216-251-9933, www.essiacoustical.com



Essi Acoustical Products Co.

CIRCLE 163 ON INQUIRY CARD

IOCA Provides Architects with International Code Solutions

OCA offers Architects technical upport services, including code nterpretations, plan review, eminars and certification, along ith International Code books nd time-saving International odes on CD. You can also earn IA CLUs by taking courses om BOCA campus on-line. For FREE International Code cata- g or to place an order, call OCA toll-free at 800-214-4321, t. 715. BOCA is the Architect's hoice for Code Solutions.



BOCA International

CIRCLE 164 ON INQUIRY CARD

Elegant Custom Hoods

The beauty of an Independant Hood is breathtaking! A close inspection reveals an exquisite under-hood design that incorporates an easy-to-clean surface with brilliant and ambiance halogen lighting. The warmth of copper, the brilliance of brass, and the strength of stainless are the powerful raw materials that capture your attention...our attention is to detail. We ultimately create a hood for the connoisseur. Contact us at 1-800-7-NEVADA or www.independent@kitchenhood.com

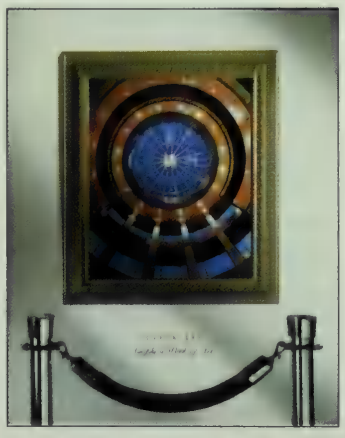


Independent Inc.

CIRCLE 165 ON INQUIRY CARD

Innovative Glass and Polycarbonate Skylights

ke classic works of fine art, uper Sky creates innovative kylighting systems that add neless beauty and natural light buildings worldwide. With early 75 years of experience, uper Sky continues to set sky- ht industry's standard for quality oducts. Discover Super Sky's ne-tested glass, and revolu- onary Polycarbonate EDGE® anslucent systems.



Super Sky Products, Inc.

CIRCLE 166 ON INQUIRY CARD

The Insulated Drainage Board

ThermaDrain® eliminates the need for a clean airspace. Currently, a 2" airspace is the primary means of providing sufficient drainage for cavity walls. However, poor workmanship, mortar blockages and mortar bridging can and does occur in airspaces 2" or greater. This allows water to bridge the cavity before it ever reaches the flashing and weepholes. ThermaDrain® eliminates workmanship problems and provides a continuous drainage path to the required flashing. Call us for a data sheet and a free sample.(800-837-4065) *Patent Pending

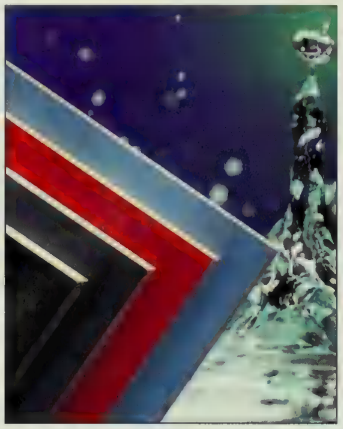


ThermaDrain®

CIRCLE 167 ON INQUIRY CARD

Duraflake MR® Particleboard

Architects specify Duraflake MR® moisture-resistant particleboard for cabinets and counters where humidity and intermittent water contact is common. Duraflake MR is stronger, absorbs less moisture, and exhibits minimal thickness swell compared to standard particle-board. Third-party manufacturers offer a wide variety of laminated surfaces. Call and we'll send you a FREE Duraflake Specifications Binder. 800-887-0748, Ext. 310



Willamette Industries, Inc.

CIRCLE 168 ON INQUIRY CARD

Concord Horizon: The Commercial Accessibility Solution

The Horizon is one of Concord's fully enclosed elevators. Its innovative cable hydraulic drive system delivers reliable, quiet & smooth operation while serving two to six stops. The Horizon is the ideal commercial accessibility solution for the physically disabled. Standard features include emergency battery powered door operation & lowering, a slack cable safety device, & emergency cab lighting. For information, please call 800-661-5112 or visit us at www.concordelevator.com



Concord Elevator Inc.

CIRCLE 169 ON INQUIRY CARD

Chadsworth's 1.800.Columns® www.columns.com

Columns, pillars, pilasters and posts available in wood, Poly-Stone™ and fiberglass. Interior, exterior. Variety of sizes and styles. Competitive prices. Job-site delivery. Worldwide shipping. Our award-winning Idea Book features an exciting collection of column projects. Includes Columns Product portfolio, $20 soft cover, $30 hard cover. Columns Product Portfolio $5 (credited to first order). Free flier. 800.486.2118 • Fax 910.763.3191



Chadsworth's 1.800.Columns®

CIRCLE 170 INQUIRY CARD

Innovative Glass Marker Boards

Peter Pepper Products offers innovative glass marker boards available in 1/4" clear tempered safety glass, with low iron content, crystal clear in appearance with a flat polished, beveled edge. The backing material is a white frit ceramic coating, screen applied and fused with the back of the glass. The glass marker board is mounted with 1" dia. aluminum standoffs. Peter Pepper Products, Inc. ph: 310.639.0390 fx: 310.639.6013 www: peterpepper.com



Peter Pepper Products, Inc.

CIRCLE 171 ON INQUIRY CARD

Connector Catalog Expanded

Wood Construction Connectors-2001, incorporates Simpson's entire connector line, including composite wood and plated truss applications. An unequaled connector reference for architects, structural engineers and building officials, the catalog includes specifications, load charts, application drawings, and building code acceptance. Nineteen new products are introduced, including the multistory Anchor Tiedown System. For a copy of the 2001 catalog (C-01), write Simpson Strong-Tie Company, 4120 Dublin Blvd., Dublin, CA 94568

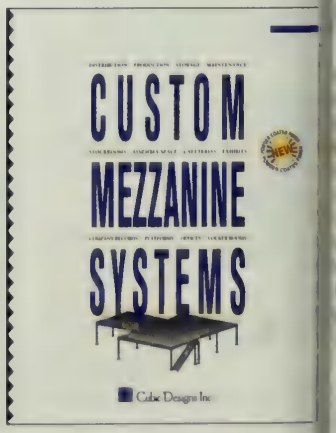


Simpson Strong-Tie

CIRCLE 172 ON INQUIRY CARD

Custom Designed Mezzanines

Cubic Mezzanines add a second or third level inside your facility & help you turn unused cube into useable space. Create new production, office, storage or assembly space, locker rooms, parts departments, distribution centers & more. Cubic Mezzanines are custom designed with CAD technology, PE stamped & backed by a lifetime structural warranty. Choose from single or mult-level designs customized to your exact area, height, color & load requirements. Cubic Designs covers all the details from onsite measurements to complete mezzanine design & installation. www.cubic designs.com 800-826-7061



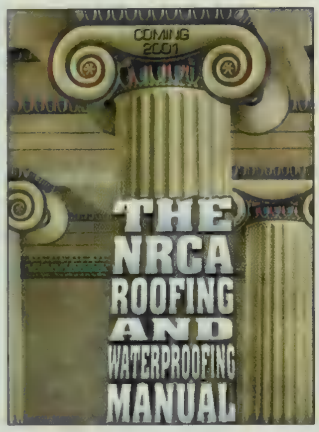
Cubic Designs, Inc.

CIRCLE 173 ON INQUIRY CARD

T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Stability, Strength, Support

Comprehensive roofing information at your fingertips. The NRCA Roofing and Waterproofing Manual, fifth edition, provides 2,000+ pages of low-slope and steep-slope information on roof system design and installation. Developed by the National Roofing Contractors Association, the Manual includes specification plates, 200+ details in both isometric and section views and a reroofing section. Call 800-323-9545. Visit www.nrca.net.



NRCA

CIRCLE 174 ON INQUIRY CARD

Art – Aesthetics – Lighting
BELL Pendant

Orbit North America Ltd. features a collection of individually hand-blown truly artistic glass series for pendant monopoint, cable system or mono rail mountings. All glass pieces are available in several unique finishes, shapes and size. A white interior coating ensures even light distribution throughout the glass, minimizing hot spots. Suitable for project applications within the residential, commercial and hospitality industry. www.orbitlight.com



Orbit North America, Ltd.

CIRCLE 175 ON INQUIRY CARD

www.panelfold.com
mail: sales@panelfold.com

ow in its fifth decade, Panelfold s long been recognized as the ader in the folding door, acoustical cordion folding partition, & the erable & relocatable partitions instry. FIRECOUSTIC: New for 2001 an updated U.L.® 1 Hour Special rpose Fire Door Assembly Classcation of Moduflex® Series 800-ecoustic® steel panel models er testing for fire resistance per . 10B. Listing for these models w includes full-thickness, acoustil single as well as double pass ors, all of the manufacturer's stanrd surfacing materials, & Moduflex ecoustic operable partitions that ersect with one another.



Panelfold, Inc.

CIRCLE 176 ON INQUIRY CARD

Insulated Translucence in Glass

Quality buildings can now have all the benefits of insulated translucent glazing PLUS the timeless beauty & durability that comes only from glass. Unlike plastic solutions, SOLERA® insulated translucent glazing units deliver over 70% light transmittance plus U values of .25 to .14. Curtain wall, sloped, skylights....glass to architectural spec. Call 902-794-2899 or visit www.advancedglazings.com

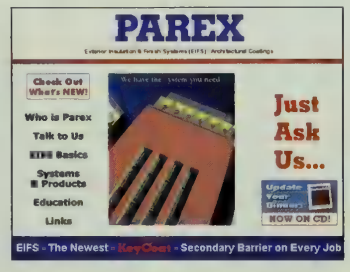


Advanced Glazings, Ltd.

CIRCLE 177 ON INQUIRY CARD

Exterior Insulation and Finish Systems

WWW.PAREX.COM presents tensive information on Exterior sulation and Finish Systems IFS), including the newest mponent of EIFS - KEYCOAT the process of applying an S direct-to-the-wall adhesive d liquid membrane secondary ather barrier together in one p. Among the site features are ecifications, CAD drawings, and A CEU seminars.

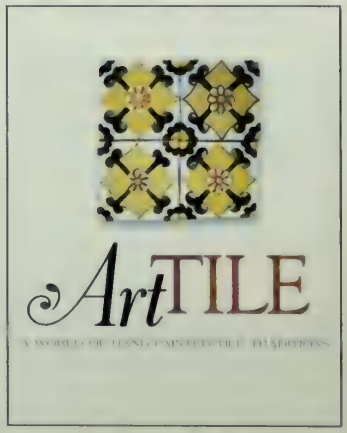


Parex

CIRCLE 178 ON INQUIRY CARD

Hand Painted Tile Traditions

An online store featuring hard-to-find, hand painted, handcrafted tile from around the world. Our tile producers are selected for their artistry & adherence to hand painted craftsmanship that represents particular, well known cultural styles. In addition to outstanding design, ArtTILE is made with high quality glazes, pigments, & durable ceramic, suitable for interior, exterior, home & commercial use. Visit us on the web at arttile.com or call Toll Free: 888-735-8453. 233 W. Rosewood San Antonio, TX 78212 Ph: 210-734-8453 Fax: 210-733-6673 Email: arttile@arttile.com

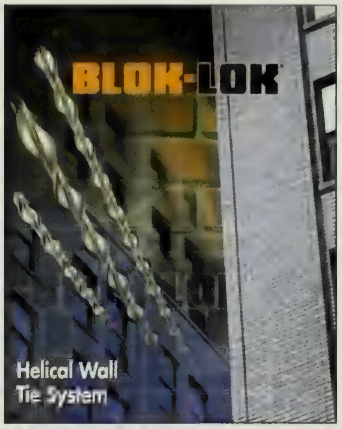


ArtTILE

CIRCLE 179 ON INQUIRY CARD

Stainless Steel Helical Wall Tie System

Blok-Lok, with over 35 years experience in the design and manufacture of masonry reinforcing and tie systems, provides innovative solutions for the repair and stabilization of defective walls. Blok-Lok offers an economical stainless steel helical wall tie that is driven into position through a properly sized pilot hole, providing a positive connection between wythes, while allowing for differential movement. Call 800-561-3026 or visit our website at www.blok-lok.com



Blok-Lok, Ltd.

CIRCLE 180 ON INQUIRY CARD

PORCH-LIFT® Vertical Platforms

PORCH-LIFT® Vertical Platform Lifts form Access Industries are designed to raise and lower a wheelchair user from one level to another indoors and outdoors for public buildings of all kinds. Easy to install and operate, the lifts require little to no site modification to install next to stairs or a landing. Standard models can be installed in a custom hoistway (shown above) to blend with any building design or accessibility plan.



Access Industries

CIRCLE 181 ON INQUIRY CARD

FRT Wood & Building Codes

"Reference Guide for Designing with Fire Retardant Treated Wood" outlines code-compliant applications for FRT wood. Guide also covers design properties, test standards, identification, and specification, and describes the Dricon® brand which has been used effectively since 1981 in multi-family, commercial, and institutional structures. (www. dricon.com)

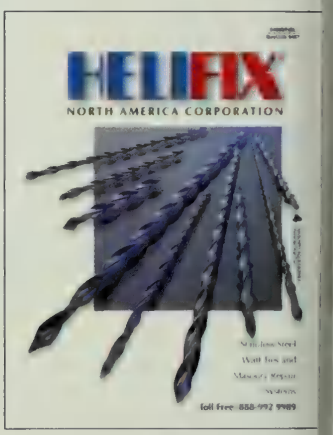


Hickson Corporation

CIRCLE 182 ON INQUIRY CARD

Stainless Steel Retrofit Wall Tie System

The unique Helifix 'DryFix' stainless steel remedial wall tie system is used to stabilize and strengthen masonry walls in both high rise and domestic buildings. The 'DryFix' system involves no toxic chemicals or complex expander devices while providing a fast, cost effective, stress free result in most common building materials. Helifix ties may also be used in new construction and masonry refacing. Call 888-992-9989 for further information.

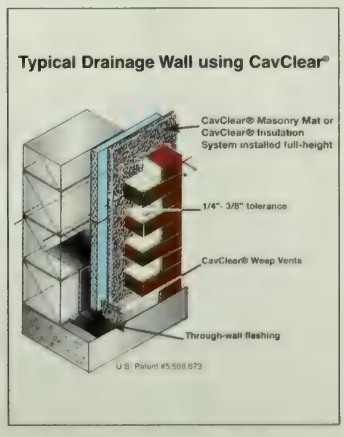


Helifix

CIRCLE 183 ON INQUIRY CARD

AirSpace Maintenance and Drainage Systems

CavClear® products provide a continuous drainage area behind brick and stone. When installed full-height, excess mortar is prevented from entering the air space. Ensures water management and helps protect masonry ties from mortar droppings which can trap moisture and corrode the ties. Prevents mortar from creating a thermal bridge between wythes and allows moisture to migrate freely to unobstructed weeps. Made of 100% post-consumer plastic recycled into a non-woven mesh. Call toll-free 888-436-2620.



CavClear/Archovations

CIRCLE 184 ON INQUIRY CARD

Pharo Shower Temple 100

The Pharo Shower Temple 100 is the focal point of any bath. This cornermount unit, consists of a four integrated bodysprays, multi-function showerhead and handshower. Overhead recessed halogen lighting creates the perfect ambiance, while the thermostatic temperature control provides a steady flow of warmth. 800-719-1000



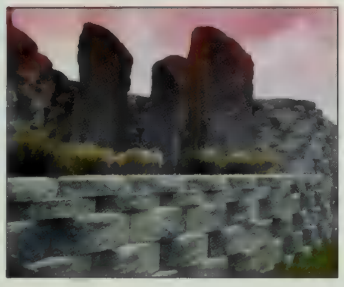
Hansgrohe

CIRCLE 185 ON INQUIRY CARD

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Keystone Retaining Wall Systems

Keystone Retaining Wall Systems offers irresistible beauty that lasts. The system was developed with simplicity of construction in mind. Six simple steps are all it takes for start-to-finish efficiency. Because Keystone offers great looks, easy installation, low maintenance, and durability, it delivers a superior return on investment. As the original and proven market leader, it's no wonder the Keystone Retaining Wall System is the preferred choice across the United States & around the world for commercial, public & residential properties. Visit us on the web: www.keystonewalls.com



Keystone Retaining Wall Systems

CIRCLE 186 ON INQUIRY CARD

Granite Cobblestone in Modules

An updated catalog features authentic European cobblestone preassembled in modular form. Modules in square, fan, concentric ring, and custom formats arrive at the jobsite ready for a quick and easy installation. Pedestrian or vehicular application. Eurocobble® has supplied the design community with traditional and customized paving solutions for over 15 years. Call toll free 877-877-5012.



Eurocobble®

CIRCLE 187ON INQUIRY CARD

Soffi-Steel™ System

For fire sprinkler and other utility retrofit. The Soffi-Steel™ System available for commercial and institutional applications, a prefabricated, rugged, snap-on soffit with an attractive and quick clean installation. Commercial Soffi-Steel for hospitals, dormitories, apartments, etc. institutional Soffi-Steel is used for jails, and prisons. Custom sizes, shapes and finishes. Contact: Grice Engineering, Inc, Phone: 800-200-3213, Fax: 608-757-1452. Mail: gei@mindspring.com Web site: www.soffisteel.com



Grice Engineering, Inc.

CIRCLE 188 ON INQUIRY CARD

Skylights and Translucent Daylighting

Major Industries celebrates its twenty-first year by proudly introducing their newest fact-filled reference on translucent daylighting. This brochure covers the full range of translucent fiberglass insulated sandwich panel systems, with stunning four-color photographs illustrating classic designs as well as newer contemporary applications. If your business involves skylights or wall systems, request literature or visit our web site at www.majorskylights.com. Toll-free 888-SkyCost, 715-842-4616 voice, or sales@majorskylights.com

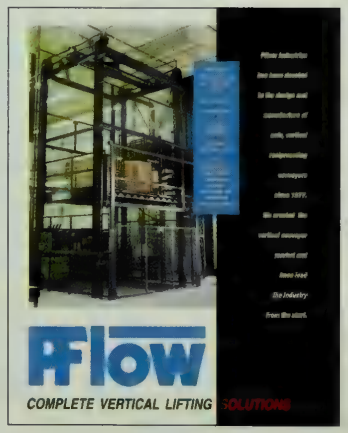


Major Industries

CIRCLE 189 ON INQUIRY CARD

Pflow Lifts Safely Move Materials Between Levels

Pflow web site offers solutions for transporting materials between two or more floor levels. Pflow Vertical Lifts are designed for mezzanines, through floor, interior & exterior applications. Capacities from 10 lbs. to 100,000 lbs., vertical heights to over 200', carriage sizes to 30' x 30'. Mechanical, hydraulic, fully automated systems & customized vertical lifts are available. Guaranteed code approval. Web site offers CSI specifications, CAD drawings, special case studies, product information, Describe Your Needs page & more. www.pflow.com 414.462-4610 Fax 414-462-2673

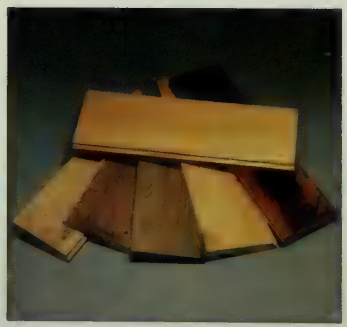


Pflow Industries, Inc.

CIRCLE 190 ON INQUIRY CARD

Historic Antique Wood: Wide Plank Flooring, Beams & Accents

Heart pine, oak, chestnut and other species rescued from old buildings, returned to use in residential/commercial interiors. Exquisite grain, color, patina. Consistent & stable. Kiln dried. Precise millwork. All reclaimed – no new wood mixed. No waste. Documented history. Certifiably green. Free brochures and samples. Phone: 800-445-2671; www.mountainlumber.com

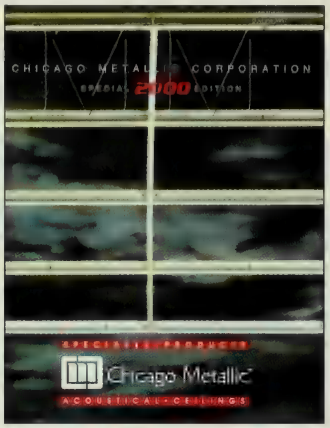


Mountain Lumber

CIRCLE 191 ON INQUIRY CARD

Metal Ceilings For Designing The New Millennium

Chicago Metallic Corporation® introduces its' special edition 2000 portfolio of industry leading ceiling suspension systems. The catalog focus is on standard ceiling grid systems with emphasis on both designer and functional systems. Also detailed are specialty products including perimeter curved/straight trim, fiberglass and vinyl-gyp ceiling panels, fiberglass reinforced panels (FRP) and the newly introduced drywall grid system. (800) 323-7164.



Chicago Metallic Corporation

CIRCLE 192 ON INQUIRY CARD

Metropolitan Ceramics' ceramic tile for indoors & out

Metropolitan 1/2" thick quarry tile is ideal for installations that require slip resistance, durability, and a handsome natural look. Metropolitan is introducing new standard shapes and custom shape options along with new glaze capabilities for even more choices. A variety of shapes and sizes, trim (including barrier free components), and new color range products are available. For our complete catalog phone 1-800-325-3945. Visit our web site www.metroceramics.com



Metropolitan Ceramics

CIRCLE 193 ON INQUIRY CARD



The more your business cares about how we do in school the more we will.



You can help students everywhere and help your business at the same time. How? By asking potential employees for their high school records.

84% of high school students say they'd work harder if they knew that employers would look at their transcripts.* Thousands of businesses are already requesting records.

When you ask, you'll be sending a powerful message to students: "How you do in school can help determine what kind of job you'll get, how much you'll earn, even how far you'll go."

What does your business gain? Better students make better entry level workers; they have lower failure rates and require less skills training. You can learn a lot about a student from a school record: grades, courses taken, attendance, and extracurricular activities.

So start now by logging on to **www.makeacademicscount.org** for information on making academics count.

Make asking for student records business as usual.

National Alliance of Business
American Federation of Teachers
National Association of Secondary School Principals
Achieve, Inc.
The Business Roundtable
National School Boards Association
American Association of School Administrators
U.S. Department of Education
Business Coalition for Education Reform
National Education Association
U.S. Chamber of Commerce
National Governors' Association

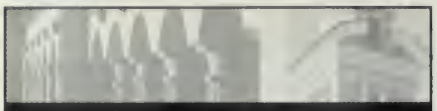
Ad Council

Education Excellence Partnership

MAKING ACADEMICS COUNT

*Source: Public Agenda (1999)

POSITIONS VACANT



Perkowitz+Ruth
ARCHITECTS

Career Opportunities
P+R is a leader in creating innovative urban, retail, and entertainment environments. If you would like to be a part of a cutting edge firm that inspires creativity and promotes professional growth, contact us today.

Architecture
Store Design
Urban Design
Hospitality
Entertainment Design

Perkowitz+Ruth Architects
111 West Ocean Blvd, 21st Floor
Long Beach, CA 90802
562.628.8000
▶ Fax: 562.628.8001
www.prarchitects.com

EOE

MICHAEL LATAS & ASSOCIATES

Executive search and professional recruiting services. Serving the construction industry exclusively nationally and internationally since 1975.

Your premier source for executive, managerial, and difficult-to-fill professional-level needs. Contact our Architecture/Engineering Division.

MICHAEL LATAS & ASSOCIATES
1311 Lindbergh Plaza Center
St. Louis, MO 63132

(314) 993-6500 • Fax: (314) 993-0632
(800) 280-7811 • http://www.Latas.com

EQUITY PARTNER

Internationally acclaimed and award-winning Architecture/Interiors Firm specializing in multi-million dollar custom homes and Restaurant/Entertainment facilities seeking 3rd equity partner with substantial management background to help meet the challenges of a growing practice. The prospect should have a strong record of architectural achievement and strong business experience (preferably with an MBA). Excellent leadership, team-building and interpersonal communication skills are required. Please forward resumé with letter, in confidence, to P.O. Box 8652, Santa Fe, NM 87504.

ARCHITECTURAL DESIGNER

Arch. firms sks Architectural Designer. Draft design and plan for project specifications. Req'd: B.S. in Arch. & 2 yrs exp in job offered or as Architect. Send resume to Mr. Szczypek: Tai Soo Kim Partners, 285 Farmington Ave., Hartford, CT 06105.

PROJECT COORDINATOR

Wanted by Forest Park, IL quarrier and fabricator of French limestone. Must read architectural plans/drawings, be computer literate, knowledge of AutoCad helpful, and strong organizational skills. Fax resume to (708) 386-0186.

ARCHITECT (INTERN)

Full Time. Competitive salary. Requires Master's degree in architecture, 1 year experience, and proof of legal authority to work permanently in the U.S. No phone calls. Send resume to: Leslie, Antunovich Assoc., 224 W. Huron St. Sue. 7 E. Chicago, IL 60610

DESIGN ARCHITECT

Architectural and interior design services for commercial, residential, and institutional clients on local and international projects under the supervision of a Registered Architect; assisting in the development and planning of design concepts for domestic and international projects in Europe, incorporating knowledge of design, construction procedure, zoning and building codes, building materials, and historical renovation and restoration techniques; assisting with the determination of functional and spatial requirements for new structures or renovations of existing structures; assisting in the preparation of information regarding design, specifications, materials, color, equipment, as well as estimated costs and construction time; assisting in the planning of the layout of the project and integrating engineering elements into a unified design for client review and approval, in both metric and U.S. systems; researching and preparing planning documents on interior architectural projects; assisting in the review of planning documents for compliance of project with Americans with Disabilities Act and building safety requirements. Required: Bachelor of Science or Bachelor of Arts degree in Architecture or its foreign equivalent plus six months experience in job offered or as an Architectural Drafter. Will accept experience as Architectural Drafter with title of Architectural Designer. Experience must have included architectural and interior design involving renovation and restoration and use of metric system for projects located in Europe. $40,000/year; 40 hrs. week, 8:00 AM to 5:00 PM Mon.-Fri. Applicants must show proof of legal authority to work in the U.S. Send 2 copies of both resume & cover letter - no calls - to Illinois Department of Employment Security, 401 South State Street - 7 North, Chicago, Illinois 60605, Attention: Joanne Breaux, Reference #V-IL-23727-N. An Employer Paid Ad.

ARCHITECTURAL DESIGNER

Full-time Architectural Designer needed for southeast architect firm. Will research, plan, design building projects using knowledge of design, construction procedures, zoning and building codes and building materials under supervision of licensed architect. Consults with client to determine functional and spatial requirements and prepares information regarding design, specifications, materials, color, equipment, estimated costs, and construction time. Plans layout of project for review by licensed architect and client. Prepares scale drawings and contract documents for building contractors. Will use computer-assisted design software and equipment to prepare project designs and plans. Must have Bachelor's degree in Architecture or foreign degree equivalent w/3.5 years of progressive experience in the job offered or position with same duties and be eligible to take the Architectural Registration Examination. Salary $35,000/yr. Send resume to: c/o Office Manager, One Piedmont Center, Suite 303, 3565 Piedmont Road, Atlanta, Georgia 30305.

PROJECT ARCHITECTS

Sear-Brown is an employee owned full service Architectural/Engineering firm with offices in key locations throughout the U.S. We offer an extraordinary compensation package, challenging work and participation in annual profit sharing and 401(k) plan with an immediately vested. Our employees have the exciting opportunity to share in our success, not just as a respected employee, but as an owner of the firm. Our Elmira, NY office has exciting growth opportunities for Project Architects with 5-10 years experience to work on Corporate Facilities & Industrial design. High tech and/or R&D lab design experience a plus. If you are interested in living in beautiful Central NY in an area offering excellent schools, model health care, and water and mountain sports, join our growing, reputable firm. Send resumes to Sear-Brown, 310 E. Church St, Elmira, NY 14901 or fax: 607.735.4100. www.searbrown.com EOE

ARCHITECT INTERN

Must have a Bachelor degree in Architecture or in a related field and two years of experience in planning and designing buildings or a masters degree in Architecture or in a related field. Please send resumes to Goody, Clancy & Associates, 334 Boylston Street, Boston, MA 02116, Attention: Human Resources.

ARCHITECT

Baltimore-based A/E firm needs Registered Architect for new Charleston office opening in Jan. 2001. Must have 7-12 years experience and be able to be registered in West Virginia. Must run projects as PM/Architect and possess good marketing skills to assist in further developing and expanding our architecture dept. in the region. Experience should be in educational, industrial, mixed-use, office, and healthcare design. $40k-$70k, depending on experience/credentials, and comprehensive benefits, including life/health/vision, 401k, cafeteria plan 8 1/2 holidays, 3 weeks leave, and excellent technical support. Send resume to Ms. Mayo Lucas. No phone calls please. Whitney, Bailey, Cox & Magnani, LLP, 849 Fairmount Avenue, Suite 100, Baltimore, Maryland 21286; Fax: (410) 324-4100; www.wbcm.com

ARCHITECT

Architect wanted by architect design co in Orlando, FL. Must have Bach. in architect & 2 yrs exp research, plan and design commercial and retail projects using AutoCAD and 3D graphics. Competitive salary. Respond to: HR Dept. Florida Design Pro, Inc. 3700 34 St., #201, Orlando, Fl 32805.

SENIOR PROJECT DESIGNER

Responsible for design of arch. projects, utilize 3D Studio, AutoCAD 2000, PowerPoint. Create bldg. models and/or 3D graphics; prepare design competition entries. Min. 4 yrs. exp. Competitive salary. Mail resume to Timothy R. Baker, AIA, 601 S. Lake Destiny Rd., #405, Maitland, FL 32751. No phone calls please.

ARCHITECT/ENGINEER

Southern Building Code Congress, Inc, Birmingham, AL, seeks an architect or engineer in the Code Development Dep. Must be a graduate of a 4- or 5-year architectural or engineering program with knowledge of building codes and standards, with an emphasis in energy conservation as well as fire safety, occupancy, and means of egress. Duties include serving as staff liaison to technical committees, representing SBCCI on technical committees of other organizations involved in codes and standards promulgation, and reviewing new information and technologies proposed for or used in construction or analyses. Responsible for communicating written and oral technical explanations, interpretations and analyses on issues related to building codes and construction. Must plan and present periodic educational programs and seminars. Some travel. Must be computer literate. Send resume to Eric Stafford, Director/Code Development, SBCCI, 900 Montclair Road, Birmingham, AL 35213. Fax:205-592-7001, email estaffor@sbcci.org

TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

RETAIL DESIGNER

Hallmark Cards, Inc., of Kansas City, MO, is seeking a retail designer with conceptual and implementation design experience for specialty retailing. A qualified designer must hold a bachelor's degree in design, have CAD and PC literacy (Word/Excel), and have a minimum of five years retail design experience for a national retail chain. The ability of the designer to implement strategy on-site at various locations is paramount. Interested candidates should send a cover letter, resume, and representative work samples to: Hallmark Cards, Inc., Creative Staffing AR rd #444, 2501 McGee, Kansas City, MO 64108-2615 E.O.E.

ARCHITECT

Research, plan, design and administer building projects. Apply design techniques and construction procedures. Consult with clients to determine functional and spatial requirements for new and renovated structures. Prepare information regarding design, materials, color, equipment, estimate cost and construction time. Plan layouts of projects, integrate engineering elements and prepare scale drawings. Conduct periodic on-site observation of projects to ensure compliance with architectural plans. 40 hrs/wk. Bachelor's Degree in Architecture. 5 yrs. exp. in job offered. $35.29/hour. Apply at the Mississippi State Employment Service, 2229 22nd Street, Gulfport, MS 39502-1720. J.O. #MS2906564. AD paid by An Equal Opportunity Employer.

ARCHITECT

Qualifications: Must have at least a BS in Architecture. Must have documented proof of 1 year experience as an Architect. Must have proof of legal authority to work in the U.S. Duties: Under close supervision, perform the following Architecture duties: Facilities Programming: establish scope, design, objectives and budget of building project; set forth in graphic form the owners requirements and desires of the project. Schematic Design: prepare presentation materials and models for review with the client, revising design based on feedback; assist in researching codes, and ordinances in compliance with city and building code regulations for project. Construction Documents: outline mock-up for project drawing set using CAD software; draft project on CAD; coordinate and cross reference architectural documents between engineering, civil, and electrical consultants; check drawings for discrepancies; train office personnel on use of CAD and imaging software. Marketing and Promotional Design: prepare presentation materials for submission to architectural design awards; use graphic design skills to develop complex architectural products such as web pages and brochures for marketing and business development using advanced desktop publishing and imaging software. Work product to be monitored by Senior Architect. Area of Employment: Colorado Springs, Colorado. Salary: $41,600/yr, 40 hr/wk. Contact: Send resume to Jim Shimada, Colorado Department of Labor and Employment, Tower 2, Suite 400, 1515 Arapahoe Street, Denver, CO 80202-2117; refer to Order Number CO4682996

PROJECT DIRECTOR

Wanted by Architecture & Awning Corp. Resp., for general sup. of designated prj. of tensile and ductile structures, such as large awnings, architect. Fabric, steel, air & tension structure, canopies and pavilions. Req. Bach. Civil Engineer & 2 yrs. exp. Respond: 7205 N.W. 44th St., Miami, Fl 33166

ARCHITECTURAL DESIGNER

Chicago, IL to research, plan, design, and administer building projects for clients, applying knowledge of design, construction procedures, zoning and building codes and building materials; to plan layout of project and integrates engineering elements into unified design for Client review and approval; to prepare computer drawings for schematic design; to design development and construction documents using AutoCAD R13 including 3D modeling, Illustrator and PhotoShop. Applicants must possess master's degree in architecture plus two years experience in the job offered or as an architectural interior designer in using AutoCAD R13 including 3D modeling, Illustrator and PhotoShop to prepare project designs and plans. Education to include completion of one course in each of the following: Building Science; and Advanced Architecture Design. $40,560.00 per year. 8:30 am to 5:30 pm, Monday through Friday. All applicants must show proof of legal authorization to work in the U.S. Send resumes to Illinois Department of Employment Security, 401 South State Street-7 North, Chicago, Illinois 60605, Attention Shella Lindsey, Reference # V-IL-23951-L An employer paid ad, no calls-send 2 copies of both resume & cover letter.

ARCHITECTURAL DESIGNER

Full-time Architectural Designer needed for southeast architect firm. Will research, plan, design building projects using knowledge of design, construction procedures, zoning and building codes and building materials under supervision of licensed architect. Consults with client to determine functional and spatial requirements and prepares information regarding design, specifications, materials, color, equipment, estimated costs, and construction time. Plans layout of project for review by licensed architect and client. Prepares scale drawings and contract documents for building contractors. Will use computer-assisted design software and equipment to prepare project designs and plans. Must have Bachelor's degree in Architecture or foreign degree equivalent w/ 3.5 years of progressive experience in the job offered or position with same duties and be eligible to take the Architectural Registration Examination. Salary $35,000/yr. Send resume to: c/o Office Manager, One Piedmont Center, Suite 303, 3565 Piedmont Road, Atlanta, Georgia 30305.

INTERIOR DESIGNERS/ARCHITECTURE FURNITURE DEALERSHIPS

American Personnel specializes in corporate designers and furniture specialists, established since 1969, are in constant search for prospective employees, to fill our various job opportunities with our national clients. Project Managers / Ast. Project Mgrs / Sales Associates / Sales Asts. / AutoCAD Operators / Administrative Support / Entry-level Designers. Clients are based out of New York City, New Jersey, and other locations. For more details on our services, please feel free to call Frank Cassisa - Executive V.P., Ph: 212-233-2900, Fax: 212-233-3043 or after 7pm at 732-360-0655.

ARCHITECTS NEEDED!

Senior Level Architects, are you interested in a career change or are you searching for better opportunities? Executive search and recruiting firm with 25+ years of experience in the architectural and engineering industry serving the nation's leading A/E firms. Please submit your resume to: CSS Search and Recruiting, Inc. c/o Heidi Lomprey, 115 5th Ave. S., Suite 501, La Crosse, WI 54601. Fax: 608-784-4904. Telephone: 608-784-4711. Email: css@csssearch.com. For a current list of our job openings, log on to our web site at www.csssearch.com

ARCHITECT: NEW YORK, NY

To develop conceptual design; to lead and coordinate a project team creating final design and technical contract documents; responsible for oversight and on-going development of office computer graphics systems; Bachelors Degree in Architecture; two years experience; $75,000/yr. Reply to HR Dept, Designtech Associates, 1501 Broadway, Ste 700A, New York, NY 10036.

ARCHITECTS - ALL LEVELS/ALL SPECIALTIES

JR Walters Resources, Inc. specializing in the place-ment of technical professionals in the A&E field. Openings nation wide. Address: P.O. Box 51214, Kalamazoo, MI 49005 Tel: (616) 381-5463 Fax: (616) 381-1141

COLORADO

You know you want to.
The AIA Colorado Job Board. www.aiacolorado.org

DESIGNER (UNLIC. ARCHITECT)

Under supervision of lic. architect, asst. research,planning, design & admin. of building proj. Utilize Auto CAD, 3D Studio Max, Corel Draw & PhotoShop for prep. of 2D & 3D colored graphic designs & inter. spaces. Min. Req. Bach. in Architecture plus 3 yrs. exp. or 3 yrs. exp. civil engr. Send resume attn: Norbert Martinez, Pres., Martinez & Amador Architects Inc., 8405 Pershing Dr., Ste. 201, Playa Del Rey, CA. 90293.

FACULTY POSITIONS VACANT

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF ARCHITECTURE FACULTY POSITIONS

Director of Landscape Architecture: The School of Architecture announces a search for a director of the School's programs in Landscape Architecture -- Master of Landscape Architecture, Bachelor of Landscape Architecture and Undergraduate Minor in Landscape Architecture. The Director will provide the academic and administrative leadership for Landscape Architecture. The appointment will be at the rank appropriate to the successful candidate's qualifications. The candidate should hold an advanced professional degree in Landscape Architecture, a significant record of excellence in scholarship and/or professional practice and demonstrated leadership. Applicants should submit a letter of interest, a current curriculum vitae, and the names, addresses and telephone numbers of at least four references. Additional materials will be required after the initial screening process. Applications will be reviewed by the committee as soon as they are received. The search will remain open until the position is filled. Applicants should send materials to: University of Southern California, School of Architecture, 204 Watt Hall, Los Angeles, CA 90089-0291, Attention: Director of Landscape Architecture Search Committee. Tenure-Track Assistant Professor in Architectural Design: The School of Architecture at USC announces a search for assistant professors of architectural design. Primary criteria are proven excellence in architectural design and evidence of potential for excellence in the teaching of design studios and for participation in the intellectual life of the School. A significant record of excellence in scholarship and/or professional practice, as well as the ability to support building technology course offerings is desired. Portfolio or examples of publications will be required after the initial screening process. Applications will be reviewed by the committee as soon as they are received. The search will remain open until the position is filled. Applicants should submit a letter of interest, curriculum vitae or current resume, and the names, addresses and telephone numbers of at least four references as soon as possible to: University of Southern California, School of Architecture, 204 Watt Hall, Los Angeles, CA 90089-0291, Attention: Design Faculty Search Committee. The University of Southern California is proudly pluralistic and firmly committed to providing equal opportunity for outstanding men and women of every race, creed and background.

ARCHITECTURAL RECORD: (ISSN 0003-858X)Vol. 188, No. 12. Published monthly by The McGraw-Hill Companies, 1221 Avenue of the Americas, New York, N.Y. Periodicals postage paid at New York, N.Y. and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 246565. Registered for GST as The McGraw-Hill Companies. GST No. R123075673. **POSTMASTER:** *Please send address changes to* ARCHITECTURAL RECORD, Fulfillment Manager, P.O. Box 566, Hightstown, N.J. 08520. **SUBSCRIPTION:** Rates: U.S. and Possessions $59; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $8; for foreign $10.

DEAN
The Irwin S. Chanin School of Architecture of The Cooper Union for the Advancement of Science and Art

The Irwin S. Chanin School of Architecture invites nominations and letters of application for the position of Dean, the academic and administrative leader of the school. The Cooper Union for the Advancement of Science and Art is the only private, full-tuition scholarship college in the United States dedicated exclusively to preparing students for the professions of architecture, art and engineering.

The mission of the Irwin S. Chanin School of Architecture is to provide for its students the finest professional education available. Fundamental to this mission is the maintenance of a creative environment where freedom of thought and intuitive exploration are given a place to flourish, where personal and public interactions stimulate an intensity of purpose and dedication, where the gifted mind and spirit can seek the means of expression and the mastery of form, and where a sense of the vast and joyous realm of creation can reveal an unending path for gratifying human experience. In fostering a context of intellectual rigor and ethical inquiry, the program of the School of Architecture gives emphasis to a broad spectrum of cultural concerns which are of significance in understanding the need and place of architecture in the contemporary context. In the flux of current international discourse regarding future directions in architecture, the school continues to assume a position on the leading edge of history, theory, and invention. Architecture is an art, a most human of arts, whose richness and brilliance, passion and profundity continue to speak as a testament of civilization.

The Cooper Union's location in the heart of New York City affords a wealth of practicing professionals of the highest distinction as faculty and has a profound effect on many other features of the program. Students live, work and study in a world city that provides an urban laboratory unparalleled in its stimulation and opportunities for research.

The School of Architecture is presently comprised of 40 faculty and a diverse student body of 150. Students are offered a five-year program leading to the Bachelor of Architecture degree. The School of Architecture seeks an individual to provide the committed leadership necessary to carry forth the standard of unqualified excellence, which the school enjoys. The Dean will affirm the mission of the School while overseeing the continued evolution of its program within an institution currently engaged in a community wide study and planning effort. Candidates must demonstrate a significant contribution to the culture of architecture, through their work in education, practice and/or writing.

Letters of application will be accepted until 12 January 2001. The position is a full time appointment. The salary is competitive and will be commensurate with qualifications. Letters of application should include a brief statement of intent and detailed curriculum vitae. No telephone inquiries, please. Applications will be reviewed in confidence. Materials should be addressed to:

Elizabeth O'Donnell / Chair, Search Committee
c/o John J. Maher / Director of Personnel
The Cooper Union
30 Cooper Square
New York, NY 10003

The Cooper Union is an AA/EOE by choice.

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN SCHOOL OF ARCHITECTURE

The School of Architecture is seeking applications and nominations for three full-time tenure-track Assistant Professor positions in the design faculty to begin August 21, 2001. All three positions will have a full-time teaching assignment of two studio courses (undergraduate or graduate), one non-studio course per year, and participation in design studio reviews. Candidates for these positions must have an M.Arch degree or terminal degree in a field directly related to the position; candidates should have either a Ph.D or state registration in architecture. Candidates must have demonstrated experience in teaching studio courses, and/or architectural practice. Candidates must present a well-defined area of research or creative work, demonstrate their achievements, and outline their plans for national recognition in that area. Candidates should have proven experience in the application of Digital Media and Information Technology (DMIT), and be aware of contemporary architectural culture. It is the intention of the School of Architecture to develop a core of design faculty employing DMIT around the leading-edge resources of the University and the senior DMIT position in Architecture. Position 1: Community Design and Development: Candidates must demonstrate strength in one or more of the following areas: community design and development, affordable housing, accessibility, sustainability, urban ecology, environmental ethics and environmental justice. The faculty appointed to this position will be expected to take a leading role in the East St. Louis Action Research Project. Position 2: Design Utilizing Digital Media: Candidates must demonstrate exceptional strength in DMIT and its application to architectural design and must demonstrate strength in one or more of the following areas: design theory; methods of design, building, and representation; site and context; and graphic applications. Position 3: Urban Design: Candidates must demonstrate strength in one or more of the following areas: urban design theory, new developments in urbanism, urban ecology, global development, sustainability, and tall building design. The faculty appointed to this position will be expected to participate in the MArch/MUP joint degree with the Department of Urban and Regional Planning, among other teaching responsibilities. The salary for these Assistant professor positions will be commensurate with qualifications and experience. Please send a Letter of Application which should include: 1) position preference, 2) current curriculum vitae, 3) the names of three references, including address, telephone number and email address, and 4) a brief statement of educational and research objectives. This statement will be used by the search committee to evaluate the candidate's enthusiasm and ability to stimulate student work. Short-listed candidates will be asked for examples of their work. Committee review of applications will begin January 16, 2001. Direct submissions and inquiries to: Design Faculty Search, Professor Michael J. Andrejasich, AIA, Interim Director, University of Illinois at Urbana-Champaign, School of Architecture, 611 Taft Drive, Champaign, IL 61820-6921 USA, Tel: (217) 333-1330 / Fax: (217) 244-2900, Web site: www.arch.uiuc.edu/school/positions.html Women and minorities are encouraged to apply. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

www.architecturalrecord.com

TENURE-TRACK ASSISTANT PROFESSOR IN ARCHITECTURE AND DESIGN.

Salary: negotiable. Start Sept. 1, 2001. Teach architecture studio and capstone portfolio courses for archi/design studies minor; digital design, drawing. Possible assignment to liberal education architecture lecture course. Creative activity/research, service and advising responsibilities. Essential qualifications include: M. Arch by 7/1/2001. Required: knowledge of current practice, history and theory in architecture and design. Experience with Mac and/or PC platforms. Ability to teach digital design in a group lab environment. Ability to teach liberal education architecture lecture course. Communication skills appropriate to a faculty position. Request position description for all essential and preferred qualifications. Application review begins February 15, 2001, and will continue until the position is filled. For full position description and application information requirements, contact: Gloria Brush, Chair, Archi/Design Search Committee, Art Dept., University of Minnesota Duluth, 317 Humanities Building, 10 University Drive, Duluth, MN 55812 (218) 726-8580 (email: gbrush@d.umn.edu). URL: www.d.umn.edu/art/ The University of Minnesota is an equal opportunity educator and employer.

POSITION ANNOUNCEMENT

The Design Center for American Urban Landscape, University of Minnesota, seeks applications for position of Dayton Hudson Chair and director. Appointment holds title of associate or full professor with tenure. Appointment to begin June 18, 2001. Director position is academic administrative, 12-month (A-term), 100%-time, five-year renewable contract. Associate/full professor position is 9-month tenured faculty appointment. The director will provide leadership and authority in DCAUL affairs. Essential qualifications: graduate degree; professional degree in architecture, landscape architecture, and/or urban design; 10+ years of relevant research and/or professional work; an understanding and vision of urban design as a professional practice, academic discipline, and mode of thinking; record of effective leadership; and commitment to fostering equity and diversity. Information about DCAUL and full position description are available online: www.cala.umn.edu/design_center/dcaul.html. Position is open until filled. Application screening will begin on February 1, 2001. Send letter of interest, CV, portfolio of design projects and/or samples of written work, a brief of vision for the center and critical issues, and names of three references to: Search Committee, Design Center for American Urban Landscape, College of Architecture and Landscape Architecture, Suite 222, 1313 Fifth Street S.E., Minneapolis, MN 55414-1546. The University of Minnesota is an equal opportunity educator and employer.

RENDERINGS

ARCHITECTURAL RENDERINGS

Fortune 500 clientele, Watercolor: 11" x 17" $1,499 + tax, 3 days. 12" x 22", $2,899 + tax, 5 days. Visa, MC, AmEx. Mayron Renderings, (800) 537-9256. Visit www.mayronrend.com

SPECIAL SERVICES

Very Fancy
Street & Patio Lights
★ *Close-Out Prices* ★
309-788-0135



TO ADVERTISE: Contact Ally Wingate
T: (800) 484-4042 ext 3042 / F: (770) 889-9152
E-mail: Ally_Wingate@McGraw-Hill.com

Synthetic Gypsum Wallboard

See what it can do for the environment...

& your next project

www.temple.com/green

Temple™
A Temple-Inland Company

COMPUTER SERVICES

Power, Functionality & Attention to Detail

14 COMPETITORS

FLATLAND



...Abundant 2D Tools; Easy to Learn and Use...
...Powerful and Useful...
Cadalyst Magazine, October 1996

Call (800) 247-2032 for Free Working Demo

FLATLAND 6... Serious Two Dimensional Drafting for Building Design Professionals

Ashcraft Architectural Computer Graphics
220 [illegible] Street, Glens Falls, NY 12801 (518) 798-4631 (800) 247-2032

Circle 190 on Inquiry Card

SPECIAL SERVICES

GreenwayConsulting
(800) 726-8603
www.GreenwayConsulting.com
Premier Research, Consulting and Publishing for A/E/C Entrepreneurs

Almanac of Architecture & Design

There is no other book like the annual 800-page *Almanac of Architecture & Design*. It is the industry's definitive reference, with hundreds of categories of information on individuals, organizations, schools, rankings, and much more! Available through fine booksellers; softcover, $34.95 retail.

AFFORDABLE. EFFECTIVE. REWARDING.



With Architectural Record and Architecturalrecord.com

Reach 250,000+ active architectural professionals at all stages of their careers. Recruit nationally and internationally. Combine Print and Online advertising to fill key positions quickly and effectively:

- **Promote your firm** as a great place to work in the magazine and on architecturalrecord.com
- **List your available jobs** in the magazine or on architecturalrecord.com
- **Create an online job fair** customized for your firm
- **Drive traffic** to your own website with your ad in the magazine or with links from ahitecturalrecord.com

For Recruiting Results, Call Ally Wingate at 1-800-484-4042, Ext. 3042.

ARCHITECTURAL RECORD
McGraw Hill Construction Information Group
A Division of The McGraw-Hill Companies

THE AMERICAN ARCHITECTURAL FOUNDATION

requests the pleasure of your company at the

ACCENT ON ARCHITECTURE GALA

Friday, February 16, 2001
Washington, DC

For ticket information, please fax (202) 626-7420

The American Architectural Foundation thanks the McGRAW-HILL CONSTRUCTION INFORMATION GROUP for its continuing sponsorship of Accent on Architecture.



Lynden Miller brings life to the concrete jungle

Interviewed by Ingrid Whitehead

Don't call public garden designer Lynden Miller the "flower lady." A painter by training and a plantings expert by trade, Miller has brought public spaces alive throughout New York City, and not by scattering planter boxes here and there. With the design and plan of such vibrant spaces as the New York Botanical Garden in the Bronx, Bryant Park and the New York Public Library Gardens, Wagner Park, the Conservatory Gardens in Central Park, and Bowling Green Park, Miller has been giving New Yorkers the gift of beautiful, natural places to escape to for two decades. A writer and lecturer as well, Miller has dedicated her life to proving that the best way to temper the harshness of city life is to give the people gardens to thrive in.

Q: *Why are the particular public gardens you've designed so successful with New Yorkers?* Public gardens have a profound effect on people in cities. And it isn't flowers. It's the magic of nature. It gives people a connection with the changing seasons. Cement and concrete are not enough, and flowers are just the icing on the cake. There is something universally beautiful about the colors of the fall, or a tree with snow on it. When I was doing the Conservatory Gardens, which are right on the edge of Harlem, people said, "They'll destroy the garden." It's not true. Gardens surprise and delight people. They don't pick it. They don't squish it. They respect and appreciate it.

What would you want architects, and the public to know about what you do? I have a particularly good relationship with architects. The ones I work with understand that I'm making places that enhance their buildings. They also understand that restored parks and public spaces result in economic benefits to the community, which helps everyone. But gardens are alive. They need constant maintenance or they won't survive.

In New York City, for example, what does that mean? The current situation is terrible. Think of how important public parks are for New Yorkers, and yet the NYC Parks Department budget has been cut continuously. For 28,000 acres of parks in the five boroughs that constitute New York City, there are only 25 gardeners. In Manhattan, where there are 175 parks, there are five gardeners. In Central Park alone, which is 840 acres, there are only two plumbers! I'm very much involved in making this issue part of our next mayoral election.

You used to be a painter. Why do plants give you more pleasure? Working with plants is infinitely more exciting than being a painter. They're alive, and although you're working with much of the same tools as a painter, you're dealing with things like time, and change, and weather. Also, I love the fact that I'm creating these spaces for people I'll never meet. My clients are people I'll never know. But I must say, I won't take a job now that doesn't have the proper maintenance program set up from the start.

Would you be as happy designing gardens in any other city? Well, gardens are important wherever you go, but I'm a New Yorker. I'm most useful here. I know what thrives in this city. And I won't disappoint. ■

Photograph by André Souroujon

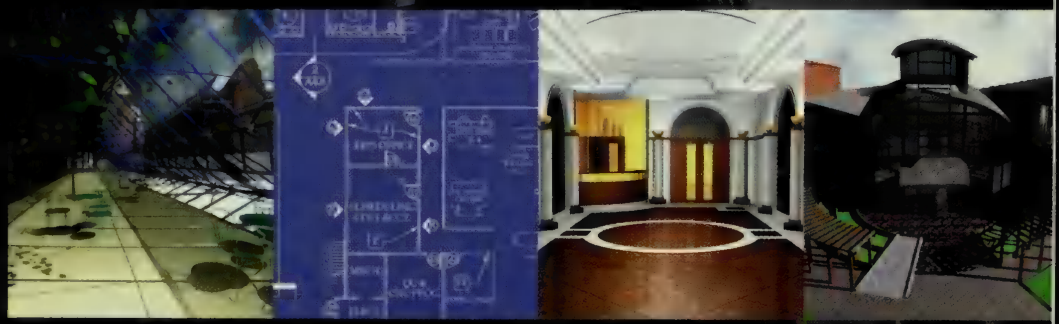
To become involved with improving the conditions of NYC's parks, call the Parks Council's Campaign to Restore Funding, at 212/838-9410 x222, or go to the Web site at www.parkscouncil.org.

www.vectorworksarchitect.com
1-888-646-4223

VectorWorks ARCHITECT

Delivers the promise of Architectural CAD





"VectorWorks ARCHITECT is a great program...I am currently getting re-trained in AutoCAD Architectural Desktop Revision 2...and it just doesn't stack up to VectorWorks ARCHITECT."
—Edward Koenig, Carmelhill Drafting Studio

Isn't it about time someone addressed the promise of CAD?
Introducing VectorWorks ARCHITECT

Engineered and built by professionals in your discipline, ARCHITECT delivers on the promise of architectural CAD. It does everything CAD was supposed to do but didn't quite. Truly a better way to design, ARCHITECT integrates Design, Production and Project Management into a system that delivers unparalleled productivity—all at a price even the smallest firm can afford.

INTEGRATION

- Complete integration of your 2D plans, 3D models, reports, schedules & client presentations
- Scalable CAD standards make it easy to structure & manage documents

DESIGN

- Unprecedented tools for programming studies and analysis
- Thousands of "Intelligent" building Objects & 2D/3D architectural symbols
- State of the art Solar Animator

PRODUCTIVITY

- An easy system for archiving, placing, & managing notes
- Automatic creation of reports & schedules
- Project Management features including issue management, error & revision control, & workgroup referencing



Special Offer to Readers of *ARCHITECTURAL RECORD*

Save over $180 by purchasing VectorWorks ARCHITECT direct for $1395 or without photorealistic rendering for $1140. Includes FREE Tech Support and a 90-Day Money-Back Guarantee.
*Existing VectorWorks users call for upgrade pricing.

NEMETSCHEK
NORTH AMERICA

CIRCLE 85 ON INQUIRY CARD


Kroin
Kroin sanitary fittings and
polished stainless
steel basins flank faucets.
Designer Prof. Arne Jacobsen, MAA
Selected for the Design Collection, AIoMA.